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THE OIL WEEKLY

OIL & GAS ENGINEERING

News | Statistics

Beware *of substitutes*

Look for the words PATTERSON-BALLAGH CORP. on every Bettis Protector. Avoid substitutes and infringing products — to assure largest and most economical service. Bettis Protectors are made solely of specially-compounded Bettis Rubber which is not duplicated in any other Protector. Fully Patented.

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"Best bet yet!" *Carried in stock at* Los Angeles, Ventura, Kettleman Hills, Bakersfield, Coalinga and Long Beach, California. Tulsa and Oklahoma City, Oklahoma. Houston, Texas. Hobbs, New Mexico. Calgary, Alberta, Canada. New York City.

April 17, 1931

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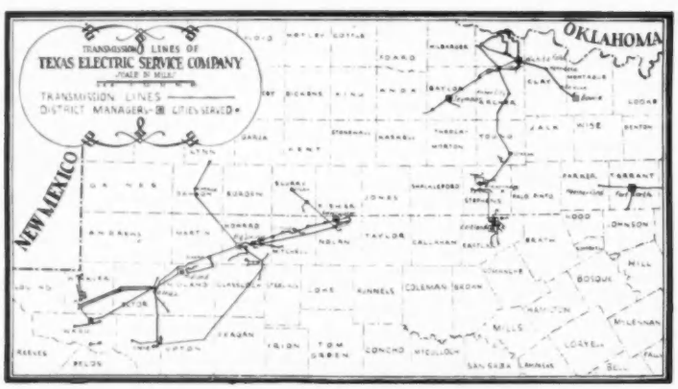
ELECTRIC POWER

For Oil Well Pumping
For Pipe Line Pumping
For Oil Refining . . . .
For Oil Well Drilling .



MEANS

- **—lower installation cost**
- **—lower labor cost**
- **—lower maintenance cost**
- **—lower total cost per barrel produced**
- **—greater over all efficiency**
- **—more dependable service**
- **—reduced investment hazard**
- **—greater safety of operation**

Details Available Without Obligation

Texas Electric Service Company

General Offices: Fort Worth

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879

An IMPROVED

Timken Tapered Roller Bearings—sealed off from crankcase

▼

Monel Metal Valves of light construction—with Bronze Seats

▼

No overlap of Piston Rods

Large Capacity SUCTION PUMP . . . also suitable for Discharge Service where large Capacity and low pressure are called for

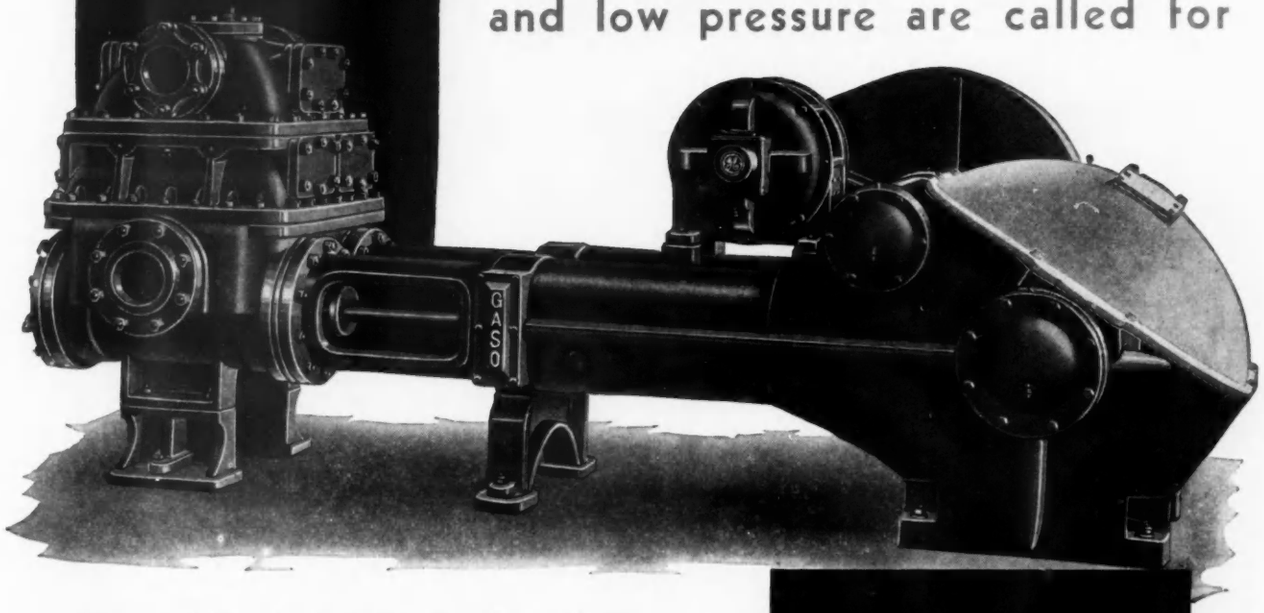


Fig. 1931 GASO Enclosed Type Timken Bearing Suction Pump With Interchangeable Liners from 6" to 10" and with 18" Stroke

Send us your requirements for full information on Gaso Pumps for any purpose.

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TULSA, OKLA. EXPORT OFFICE: NEW YORK, N. Y.

Wide face, stub tooth semi-steel Gear and forged steel Pinion Gear, running in oil—silent and efficient

▼

Connecting Rod Crank End is equipped with steel removable shell bearing, babbit lined.

GASO PUMPS

for every oil industry need

IT'S A NEW SPUDDER ...but it has behind it 24 years of oil field EXPERIENCE

The assurance with which we present the Moore Type 10 Champion Spudder is based on our many years of experience in manufacturing oil field equipment. In addition, it has been thoroughly field-proven.

This spudder offers a convenient and inexpensive means of drilling shallow wells, cleaning out old wells to a depth of 2500 feet without the use of a derrick or standard rig front. It is light weight, portable and easily operated. A tractor, such as used on every lease, supplies the power and is used to haul the equipment from well to well.

Where a pumping derrick is erected over the well, Type 10-S Spudder is used. It is the same as Type 10 except that it has a stub frame to go under the bull wheel girt of the derrick.

LEE C. MOORE & COMPANY, Inc.

Established 1907

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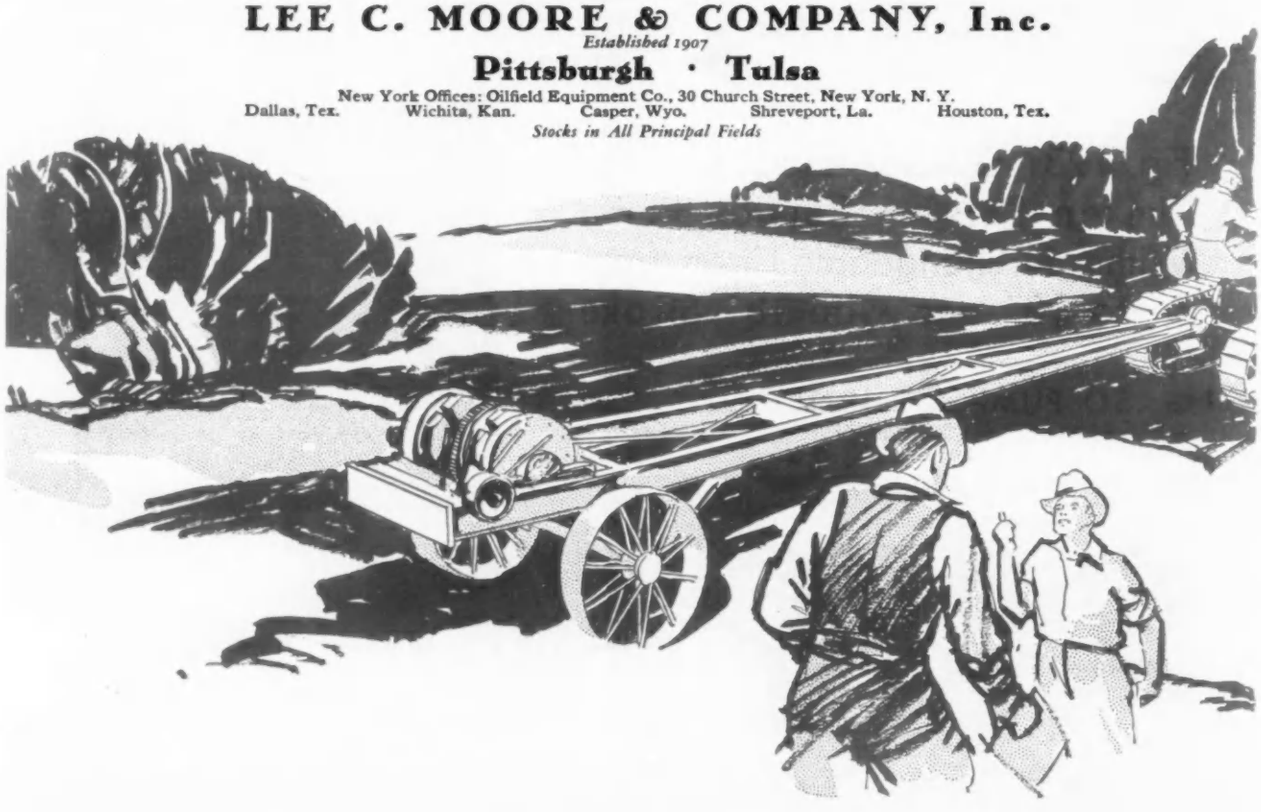
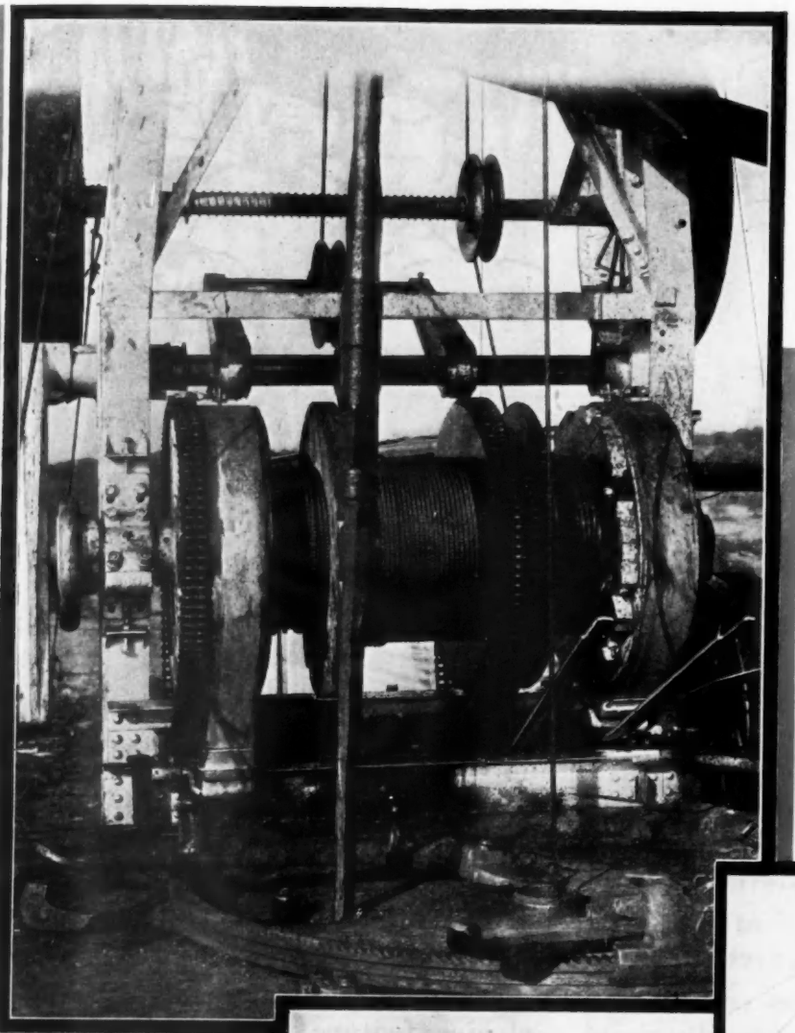
New York Offices: Oilfield Equipment Co., 30 Church Street, New York, N. Y.

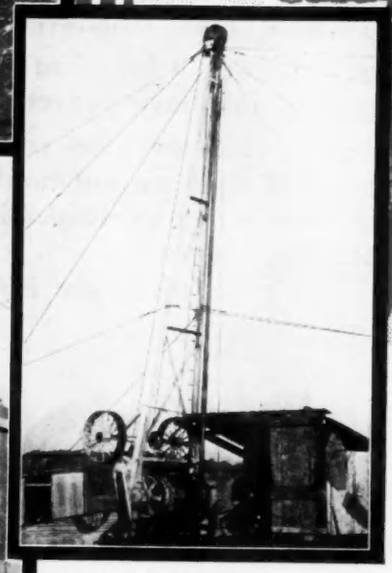
Dallas, Tex. Wichita, Kan. Casper, Wyo. Shreveport, La. Houston, Tex.

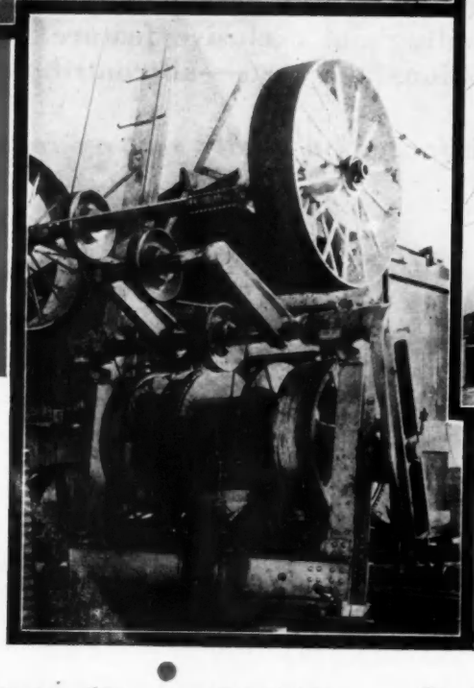
Stocks in All Principal Fields





Front View—The convenient location of the operating levers gives the driller constant control of the Moore Spudder.

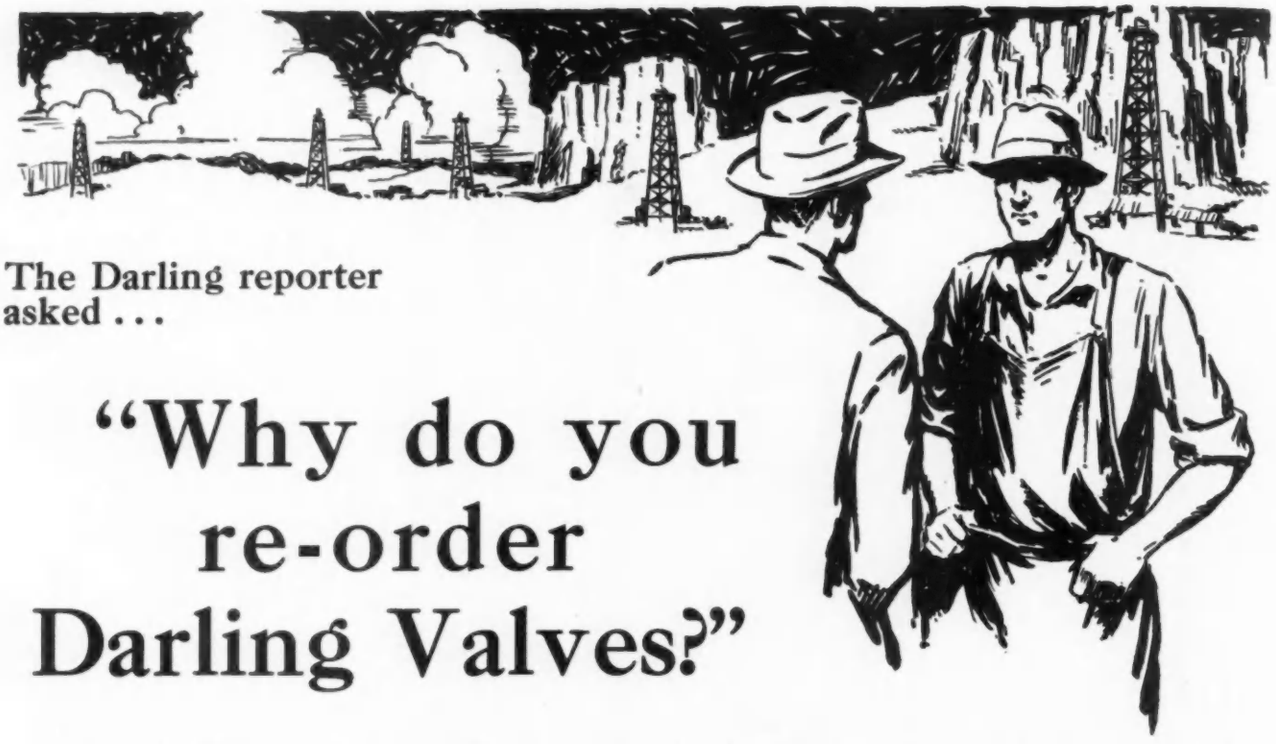




Above—*A complete unit. Quickly set up, and easily powered and transported by a standard tractor.*

Left—*Rear View—An efficient drilling motion, comparable to that of a standard rig, is produced by the crank and spudding arm shown here.*

Moore Champion SPUDDER



The Darling reporter asked . . .

"Why do you re-order Darling Valves?"

"Simply because we're getting extra good service from them. True enough, they are a bit higher in price. But it's the final cost we're looking at. And when we check the final cost of Darling on our balance sheet we feel it's just common sense to specify them whenever we need gate valves."

That's the way a lot of others feel about Darling Valves. Years of service on every type of job have proved their ability to meet the most severe conditions.

Darling Gate Valves are constructed on sound mechanical principles—with the revolving gate discs an outstanding and exclusive feature. The finest of metal—exacting workmanship, inspections and tests—all contribute to the long-time service of Darling Valves.

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Darling Forged Steel Gate Valve, Dar-a-loy trimmed. For Drilling well control, flow lines, high pressures, and other hazardous conditions.

Darval Semi-Steel Gate Valve, Dar-a-loy trimmed. Made in all sizes for general field use, pipe lines, drilling through, well control and well flow lines.

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"NONE BETTER"
PURE MANILA

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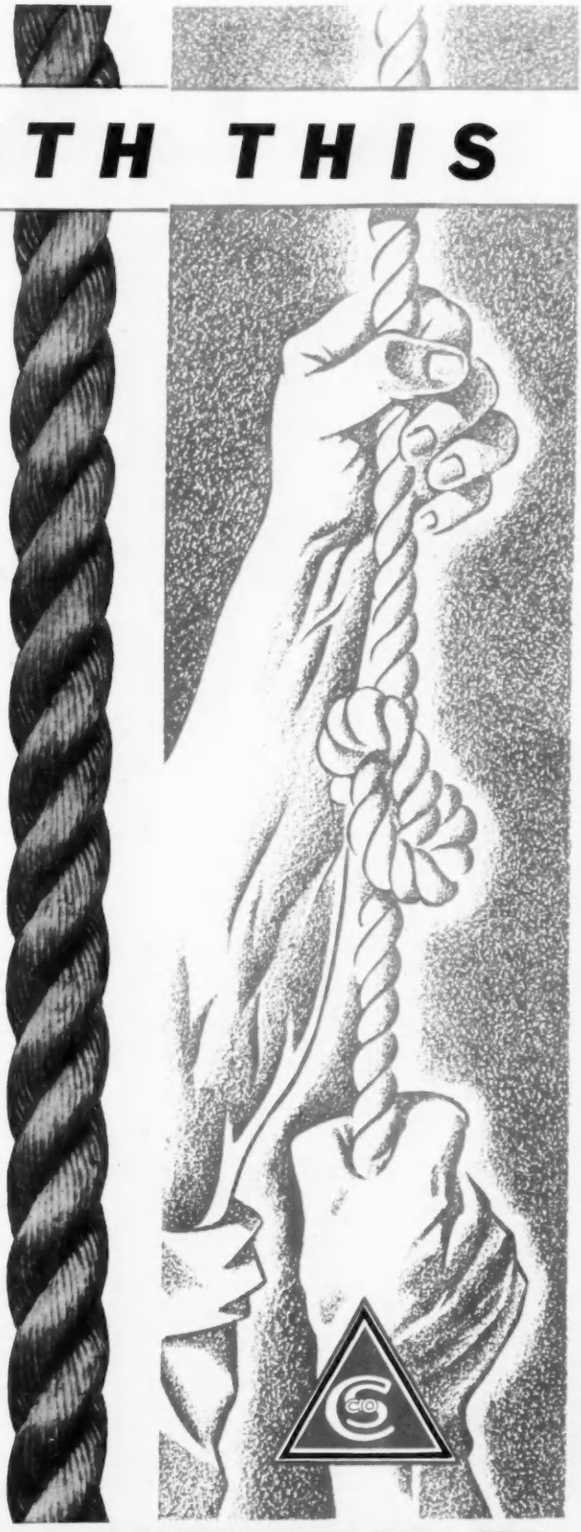
Cat Lines
(Look for the Red and Black Marker)
Bull Ropes
Drilling Cable
Torpedo Lines

Since 1842 New Bedford has been recognized by users everywhere as the name that takes the guess out of cordage buying.



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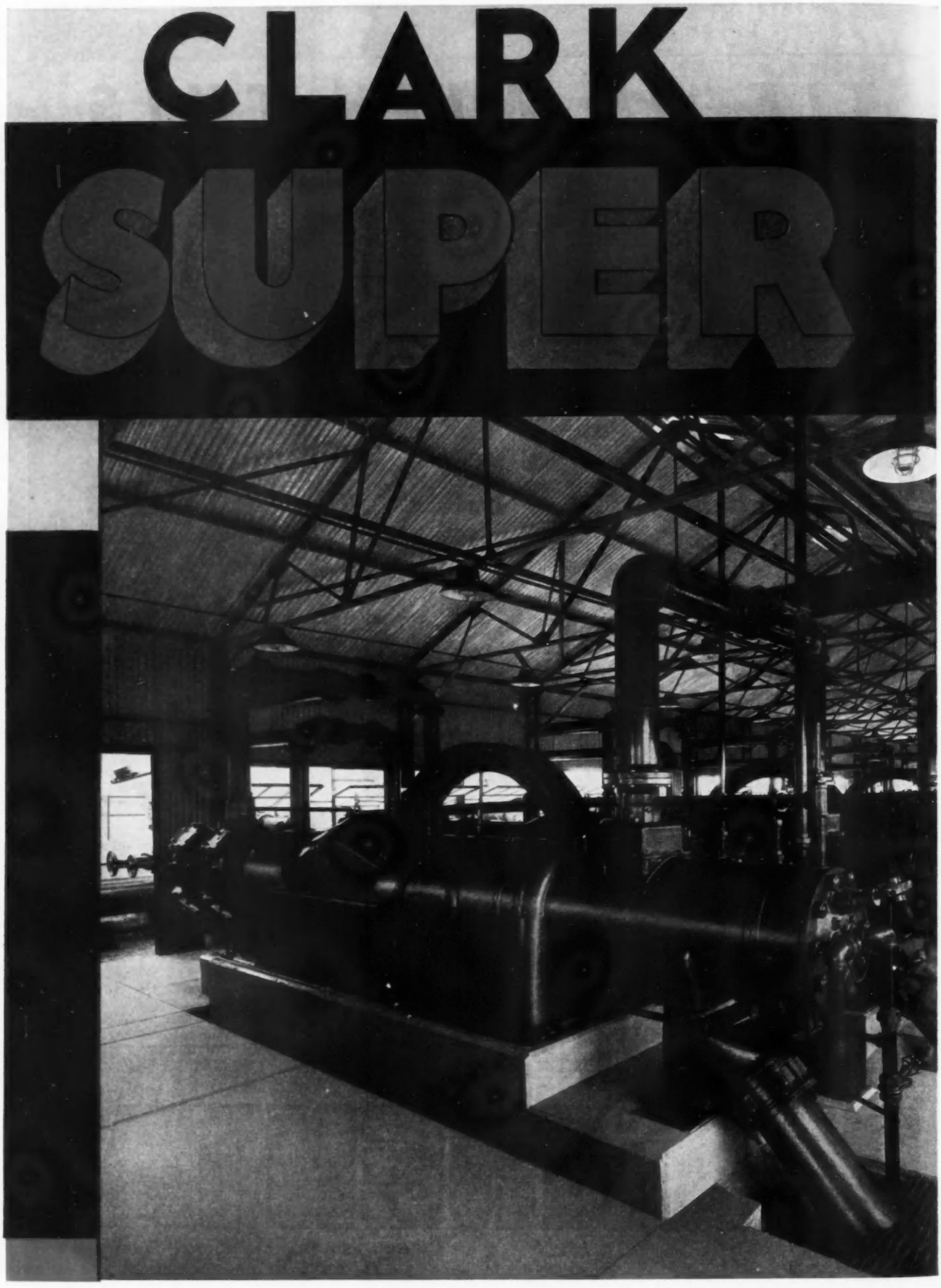
CONTINENTAL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The outstanding economy of CLARK Super Two-Cycle Gas Engines has led a wide majority of operators to use CLARKS in Natural Gasoline Manufacture, in Re-pressuring and Gas Conservation and in Vapor Recovery work.

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California: Smith Booth Usher Company, Los Angeles, California
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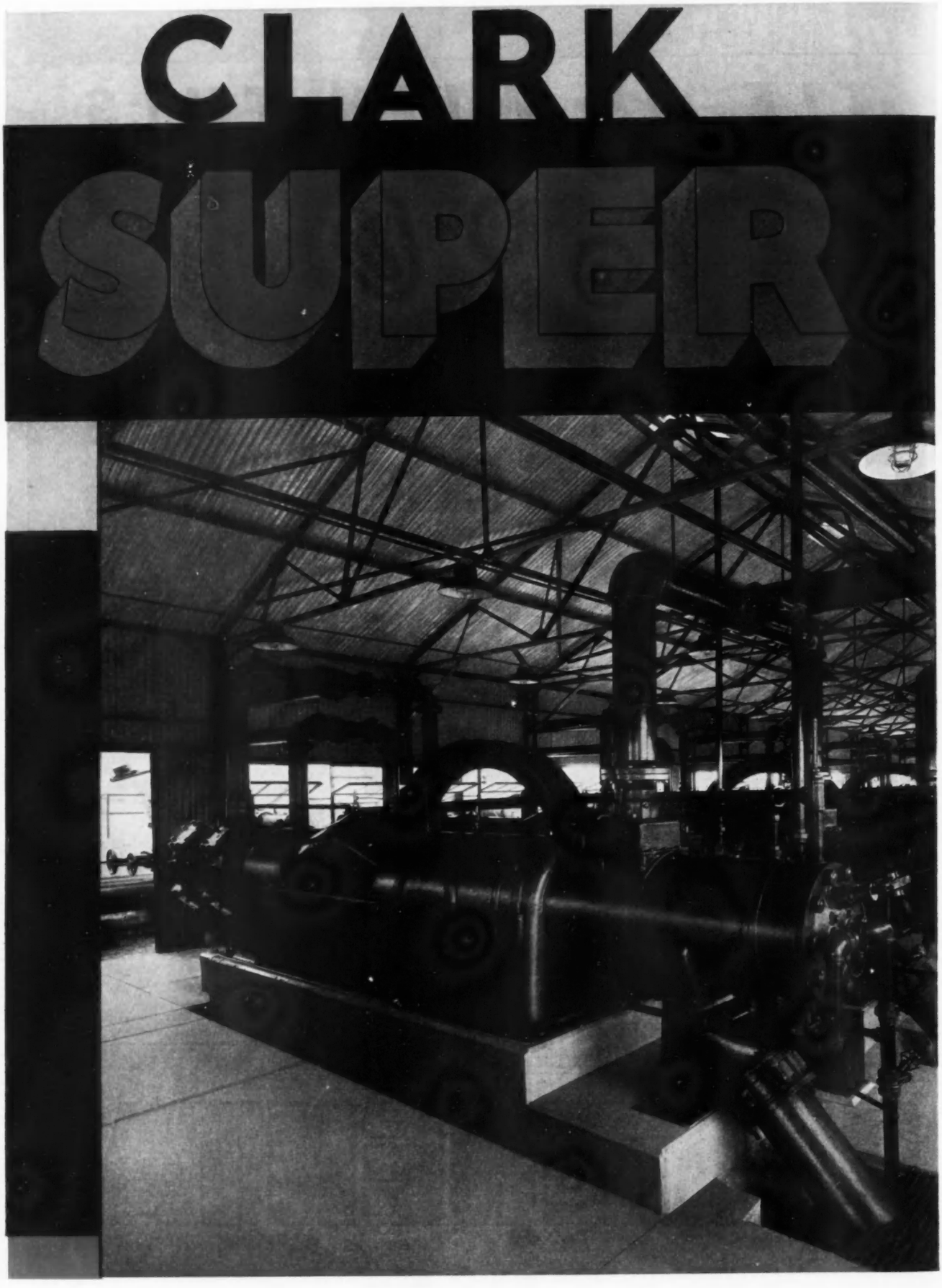
Foreign Offices: Clark Bros. Company, London; Balkan States Trading & Importing Co., Bucharest, Roumania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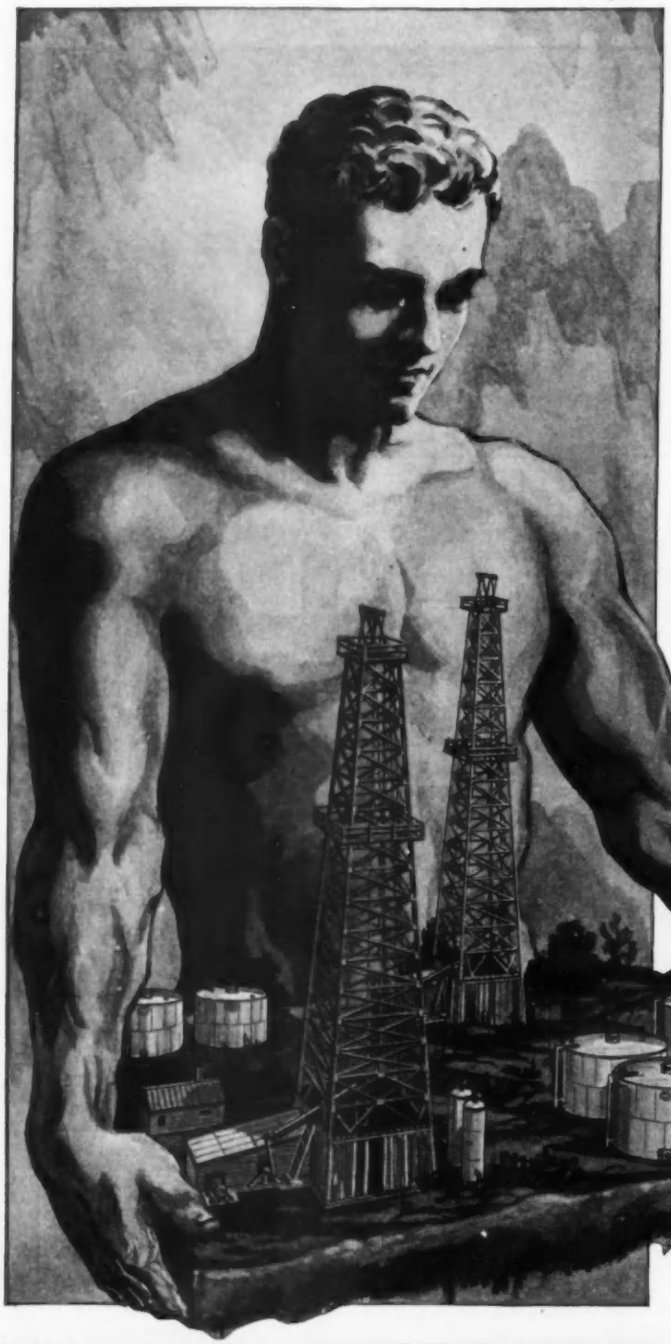
MOVING DAY



in the Oil Fields

SUPPOSE you moved a Rig every week! A huge undertaking to contemplate. Even infrequent "moving days" are a trial to oil men who do not have Parkersburg Rigs.

When you make your next move, think of the "one-wrench" bolt feature of Parkersburg Steel Derricks—the simplicity of derrick design which makes dismantling and assembling quick and easy—reduces costs and speeds production.

Think of the bolted construction of Parkersburg Steel Wheels—strong, rigid, easily assembled or dismantled. Think of the two-piece rim on Parkersburg Type P Band Wheels which means greater convenience in handling, and Parkersburg Steel Posts, fabricated for fast dismantling and greater portability.

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TRADE MARK REG.

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..DOWN DOWN DOWN...

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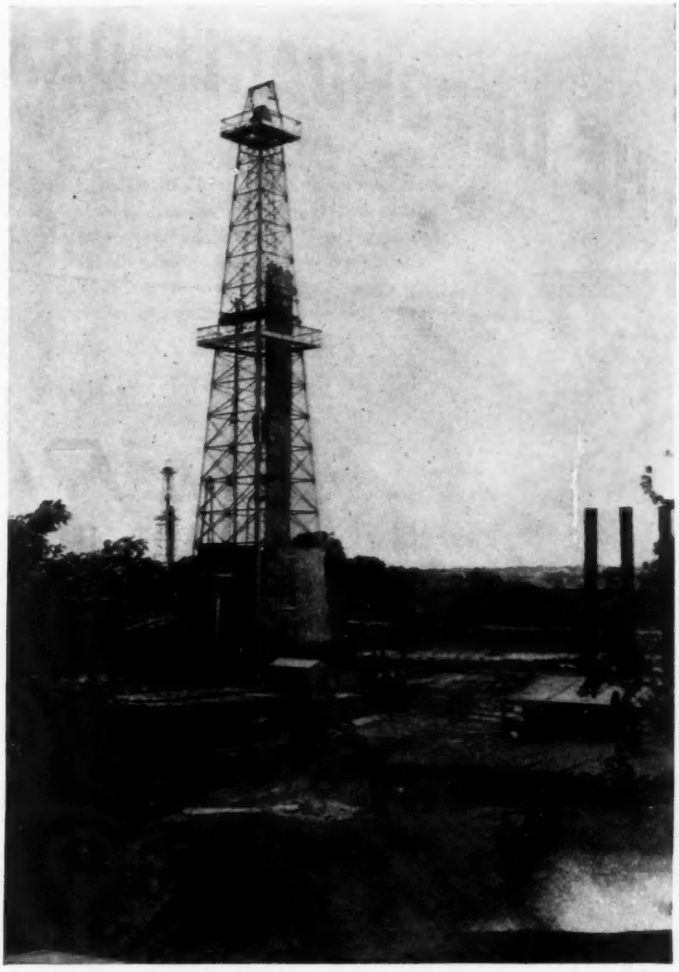
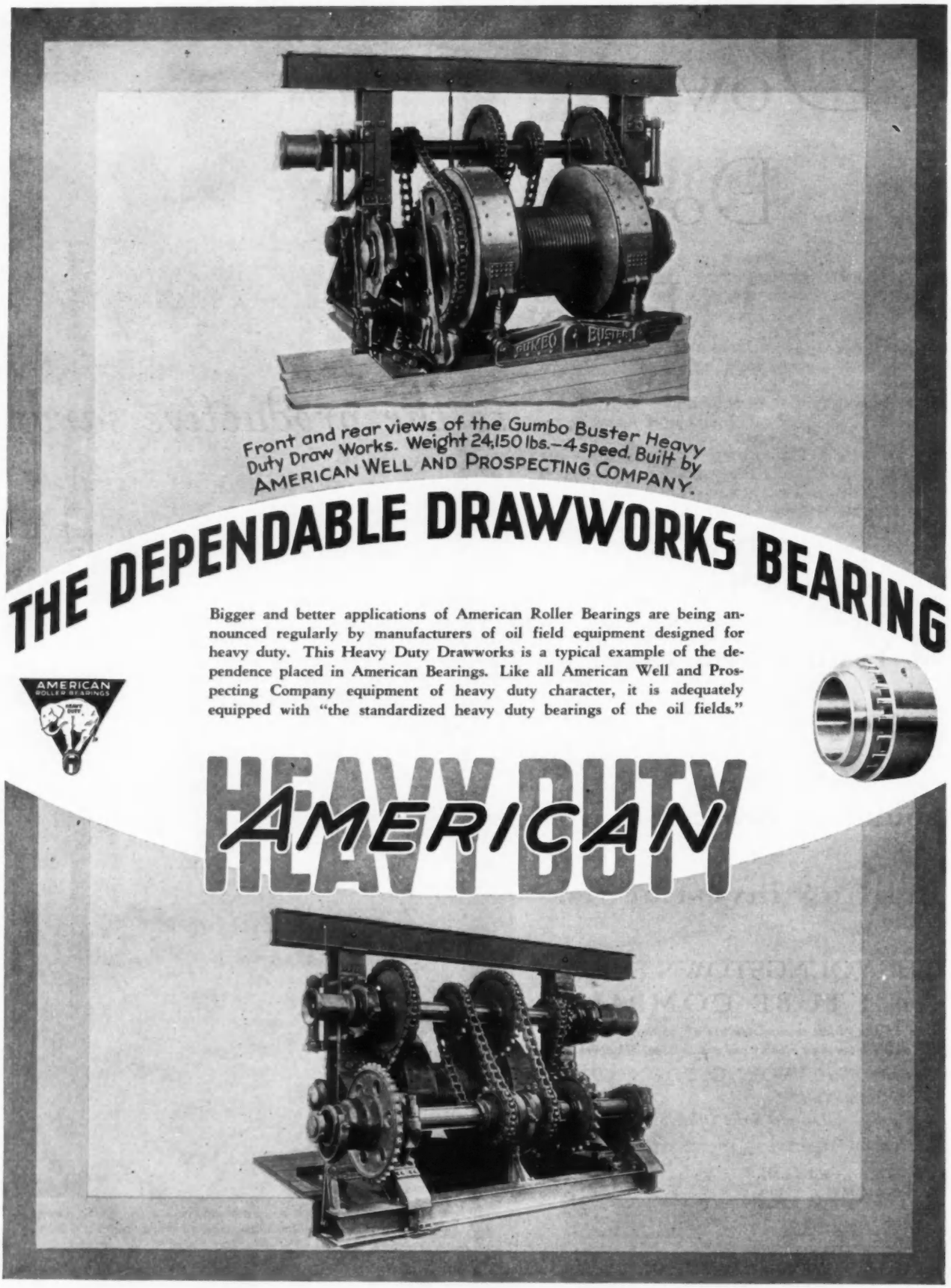
GALVANIZED SHEETS PROTECT
SAVE WITH STEEL



Anderson-Prickard Oil Corporation's Mary Gibbons No. 3 well, one of the thousands of wells in which Youngstown tubular goods are used.

YOUNGSTOWN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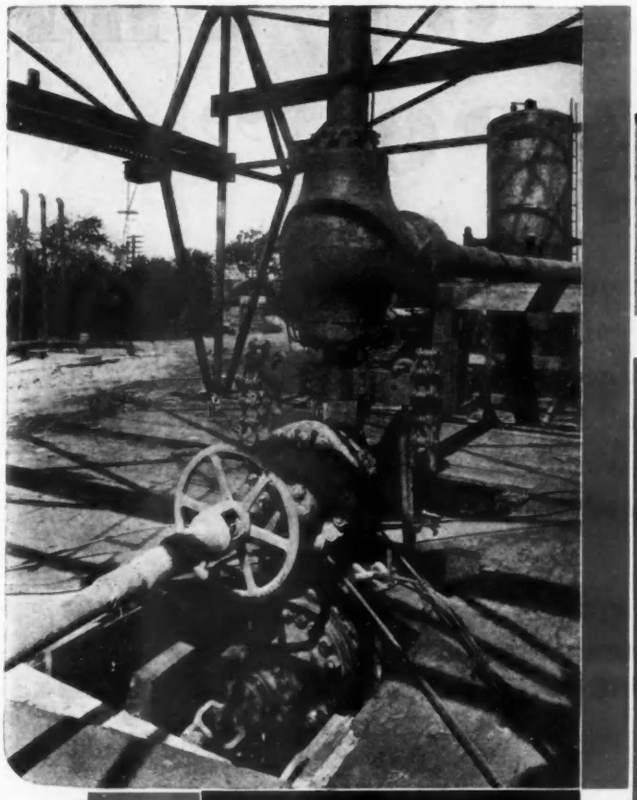
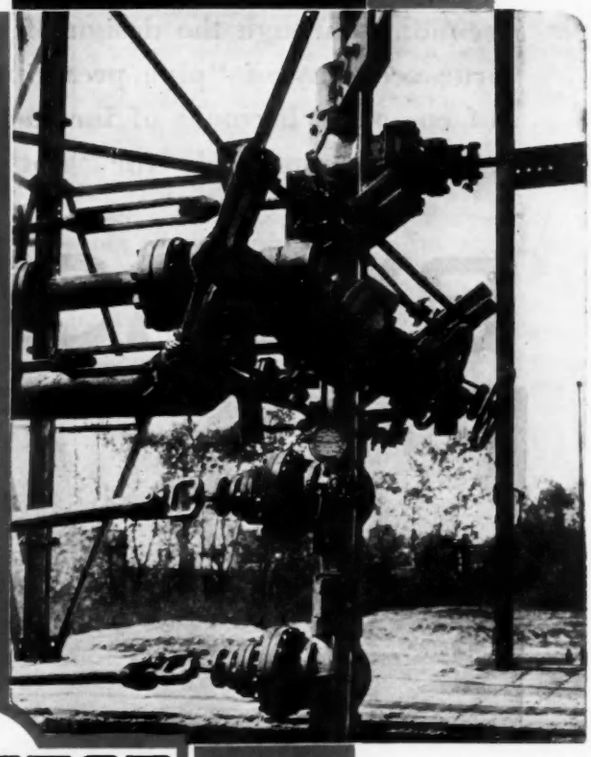
Front and rear views of the Gumbo Buster Heavy Duty Draw Works. Weight 24,150 lbs.—4 speed. Built by AMERICAN WELL AND PROSPECTING COMPANY.
THE DEPENDABLE DRAWWORKS BEARING
Bigger and better applications of American Roller Bearings are being announced regularly by manufacturers of oil field equipment designed for heavy duty. This Heavy Duty Drawworks is a typical example of the dependence placed in American Bearings. Like all American Well and Prospecting Company equipment of heavy duty character, it is adequately equipped with "the standardized heavy duty bearings of the oil fields."
AMERICAN ROLLER BEARINGS
HEAVY DUTY
AMERICAN



FLOW LINE VALVES



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As manufacturers of genuine wrought iron pipe since 1864, we are being consulted more and more by oil officials who are seeking greater economy through the design of balanced pipe lines. As the wisdom and true economy of "pipe prescription" become established, our knowledge of corrosion becomes of increasing value. Varying conditions of corrosion are responsible for "hot spots", and superintendents who are

BYERS • GENUINE • WROUGHT-IRON PIPE

BYERS • GENUINE • WROUGHT-IRON PIPE

troubled least with this particular operating problem are the most staunch supporters of Byers Genuine Wrought-Iron Pipe. Just as "pipe prescription" is an effective solution to standard pipe selection, performance of wrought-iron in the oil fields proves it is the solution to the specific problem of "hot spots". Our engineers will be glad to discuss your particular corrosion problem. A. M. Byers Company, Pittsburgh, Pa.

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AMERICAN FISH TAIL

REDUCE ROUND TRIPS 50%

Keep your pipe in the hole with this better fish tail bit.

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Complete machine shop and bit service at Kilgore also warehouse and bit service at Joinerville.

American Fish Tail Bit

The American Fish Tail Bit is a departure from the conventional design of Rotary Drilling Bits and is especially effective in drilling Gumbo or soft formation. The Water Courses extend through the entire body of the bit with the outlet on the blade just above the cutting edge, which prevents the bit from balling up and will, therefore, cut your spudding down to a minimum. This unique feature hastens the mixing of cuttings and promotes the rise of mud in the hole.

Our Fish Tail Bit makes more hole every time run and reduces your round trips 50%, keeping your pipe in the hole instead of on the way out and into the hole. It reduces labor, expense and speeds up production.

This bit is manufactured with ample material for redressing, and cutting surfaces are easily prepared and hard surfaced for long service. They hold well to gauge and there are no twist-offs, no balling up and very little spudding is necessary.

A trial will convince you that you can't afford to use any other type of fish tail bit.

We will hard surface the cutting edges to your specifications at a minimum charge.

Specify size and type of thread when ordering.

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IRON & MACHINE WORKS CO.
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American Releasing and Circulating Overshots
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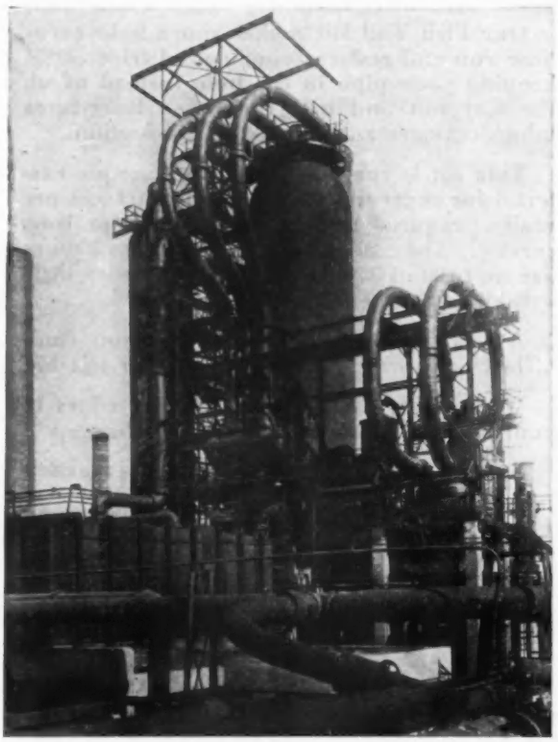

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OPERATED by Texas-born men of long service in the Bridgeport organization, this new Kilgore store is eminently fitted to carry out to the fullest extent Bridgeport's 24-year old policy of Quality equipment, backed by Bridgeport's 24-hour service, and Fair dealing.

You are always welcome at our Kilgore store—conveniently located on Supply Row. Here you will find a complete line of the world's best known and most dependable drilling and fishing tools and supplies—all maintained up to the well-known Bridgeport standard of efficiency.

Call or write Bridgeport, collect—FIRST—for your needs. Our service will save you time and money.

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MACHINE COMPANY

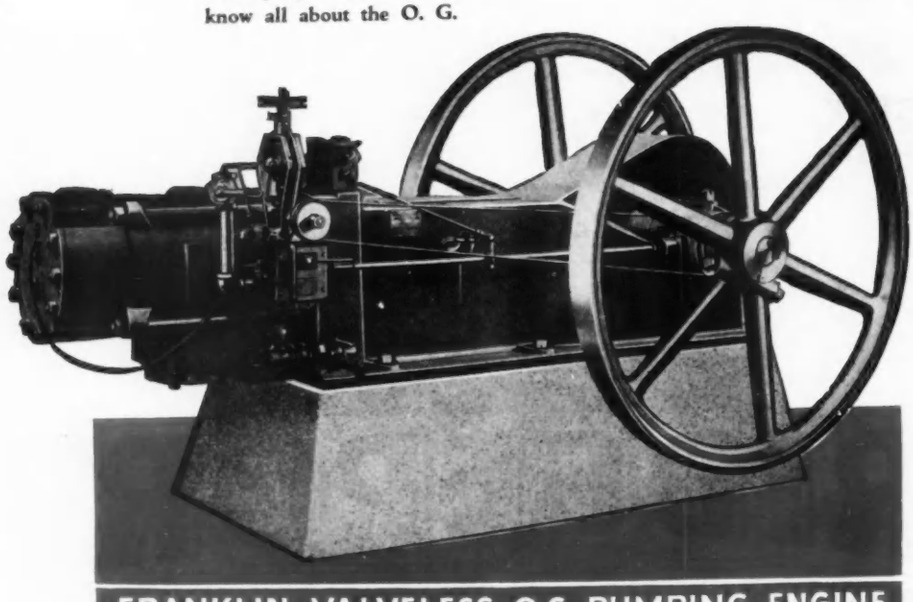
Wichita, Kansas

Before You Buy—Investigate the Many Fine Features of This *Outstanding Engine*

The Franklin Valveless O. G. Gas Engine isn't just another engine — it's the finest Pumping Gas Engine excellent engineers and first class workmen can turn out. Space is not available to describe its many fine features but you are invited to investigate every detail of its mechanism. It may be converted to oil fuel in less than 90 minutes — a desirable and outstanding feature where gas supply is weak or dwindling. Many operators say this one feature, alone, warrants the purchase of this Pumping Engine. But when you add fuel and lubricating economy, high efficiency, top performance and long life — to say nothing of power without the burden of excessive weight — you have THE IDEAL PUMPING GAS ENGINE.

Ask us to prove the real worth and outstanding value of the O. G. Gas Pumping Engine — no obligation, of course. But you can't afford to buy any Pumping Engine until you know all about the O. G.

Franklin Valveless Engine Co.,
Franklin, Penna.



FRANKLIN VALVELESS O.G. PUMPING ENGINE

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Editor

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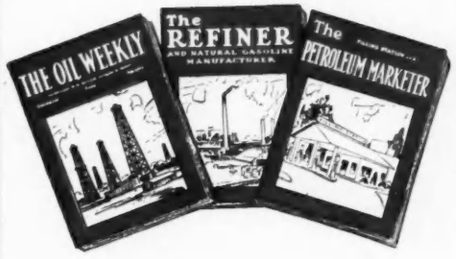

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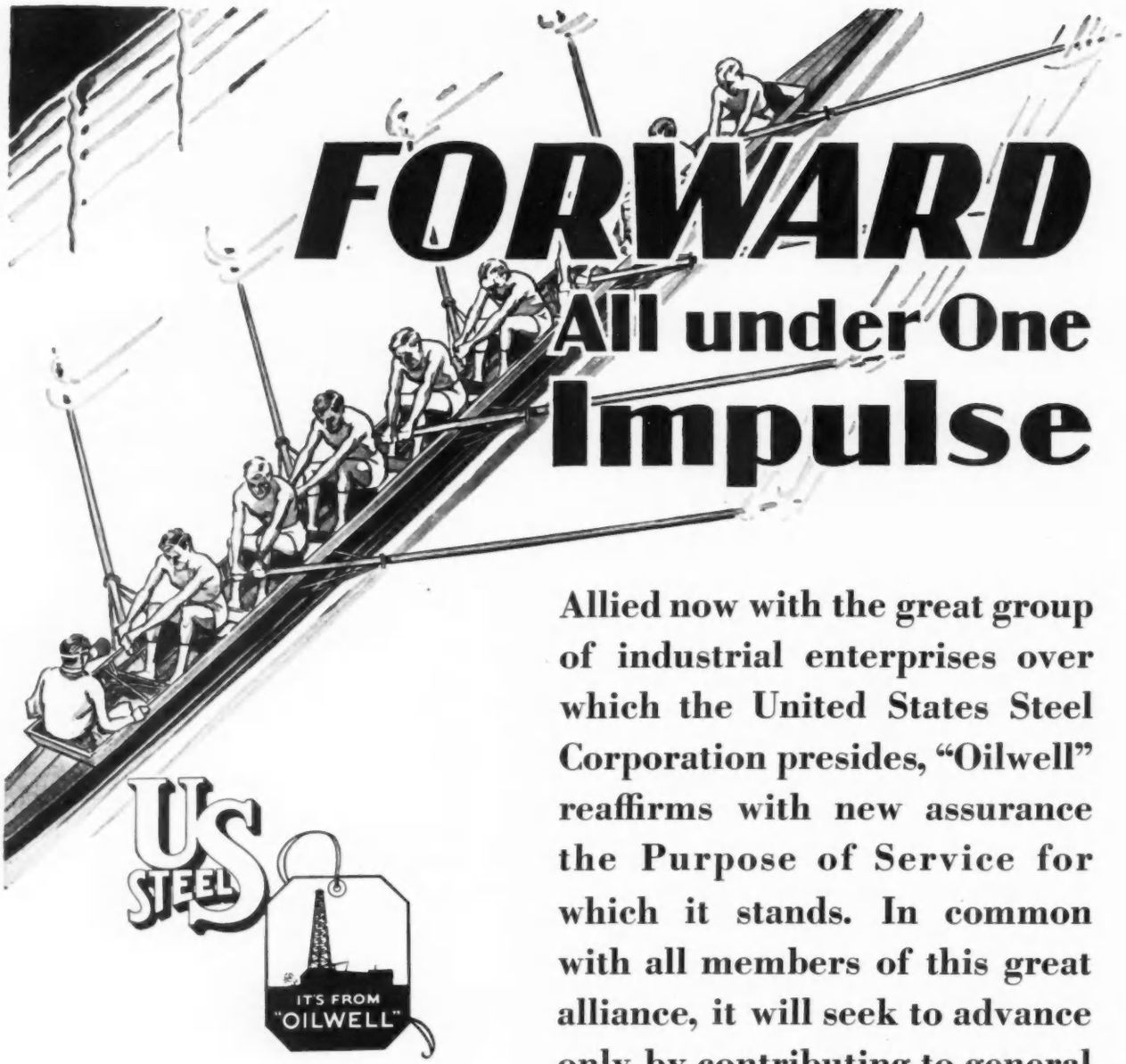

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Conservation Board Approves Modified "Texarkana" Plan

By CLARENCE L. LINZ
Washington Correspondent

WASHINGTON, D. C.—A definite program for conduct of the oil industry, under which it is hoped some stabilization of conditions may be secured, a modification of the so-called Texarkana plan, was given the general approval of the Federal Oil Conservation Board April 9 at a meeting with the old states' advisory committee, and only the co-operation of the marketing companies, which will be sought at their meeting in St. Louis April 15, is needed to make the plan effective.

Three concrete activities are provided for under the plan, the first that the Federal Oil Conservation Board continue its voluntary committee on economics, to make periodic examinations into the status of the oil industry and formulate national and regional forecasts of supply and demand, and that such forecasts be given due consideration by the interstate committee and recommended, with any necessary modifications, to the respective state conservation bodies; the second that the legislature of each oil producing state be requested as rapidly as possible to authorize negotiation of an interstate agreement for co-ordination of conservation measures, any such agreement being subject to ratification by the states; and the third that, pending the working out of such a compact, an advisory committee, representing the several oil producing states continue to function as a liaison and fact-finding body, to present to the conservation authorities of the various states, at such time as may be deemed necessary, recommendations for more effective co-operation as between the states.

A feature of the plan as presented to the board was the elimination of all reference to price fixing, made following a warning by Secretary of the Interior Wilbur, chairman of the board, that the government could not give consideration to any plan in which the fixing of prices or other activities which might be counter to the laws, was included.

Notwithstanding the desire of the independent oil producers to have the governmental body indorse the Texarkana plan without modification, a note of satisfaction was indicated by them at the announcement by Secretary Wilbur that general approval had been given to the proposals presented the board. The secretary pointed out that the oil board is without any power to enforce any action but stated that it was ready and anxious to co-operate and would give all the help possible to making the plan effective.

United Action Required

During discussions of the plan which was finally approved, Cicero I. Murray of Oklahoma, chairman of the advisory committee, explained that it was contemplated that the 10 states involved in the matter should act as one in all of the activities covered by the plan and that Oklahoma and Kansas already have sufficient powers to carry these activities into effect, while the Texas legislature, now in session, will be asked to enact the necessary legislation and next year, if still desirable, the United States Congress will be asked to give its approval.

As a substitute for the modified Texarkana scheme, R. H. Smith of Tulsa suggested federal regulation of the industry, with control of imports to be exercised through a board to be created by congress, which also would be authorized to grant certificates of public convenience and necessity for the drilling and operation of wells, in brief, giving the government practically the same type of control over the oil industry as it now exercises over the railroads through the Interstate Commerce Commission. Mr. Smith argued that state control breaks down because the states are without any authority over pipe lines or imports.

The conference paid some attention to the situation in East Texas, declared by Robert R. Penn of Texas, technical expert for the advisory committee, as a probable producer of 1,000,000,000 barrels or more, to which the Texas Railroad Commission's proration order will not apply until the court suit now pending, is decided.

That proration of this tremendous field is essential to the wellbeing of the industry was emphasized by Mr. Penn, who declared that "the complete failure of the oil industry, such as we are now faced with, could do more to increase the general depression of the country than any other cause.

"We are not attempting to have the oil industry prosper

at the expense of any other section of the country or industry," he explained, "but we realize that prosperity in our industry is essential to that of countless other lines of industry."

At the same time he stressed that a still greater interest lays in preservation for the future of petroleum reserves and competitive conditions. "The nation is faced with a definite challenge from Red Russia," he declared. "It is inconceivable to expect the United States to sit idly by and let its industry go to ruin, thus enhancing the spread of undemocratic principles such as those of Russia. We feel the time will come when other industries, too, will seek federal assistance to level out peaks and valleys and provide the nation with an even keel."

Penn's Stand Substantiated

Mr. Penn's assertions were substantiated by James A. Veasey of Tulsa, general counsel for Carter Oil Company, a subsidiary of Standard Oil Company of New Jersey, who predicted that if the present effort fails, 25 to 30 companies would remain in business and all other factors in the industry pass out. He charged the oil board with its responsibility for carrying out restrictions upon oil imports, declaring that it is not fair to expect proration of the domestic fields and not a reduction of imports.

Suggestion of enforced restriction of imports caused a considerable debate, Harold G. Walker of the Pan American Petroleum and Transport Company, a subsidiary of Standard Oil Company (Indiana), inquiring what form would be adopted under congressional action, Mr. Veasey explaining that he did not have in mind an embargo on oil but a limitation on imports. Mr. Walker, during the course of the debate, declared that the companies would not prorate imports to the extent of the reduction in flush field production but would base their curtailment on the total domestic reduction.

This statement brought a charge from Wirt Franklin, president of the Independent Petroleum Association, that the reason Mr. Walker's company had reduced imports was that its Mexican resources "had played out."

"The New Jersey and the Gulf companies made reductions," Mr. Franklin asserted, "but the other two importing companies increased their gasoline imports 125 per cent. Whenever we make a reduction in production, the slack is taken up in increasing imports."

Declaring that the royalty owners and independent producers of the Mid-Continent have themselves "brought about the present situation of over-production and low prices," Mr. Walker declared that their attack has been centered upon American companies producing petroleum in foreign fields. These companies, he asserted, "are as important in their sphere of influence as are the American wells of California, Oklahoma or Texas, in theirs. These companies are just as American as any companies operating in the Mid-Continent field. The Eastern seaboard for years has depended upon imports by these companies to maintain fairer prices that would obtain if the Eastern market were solely dependent on crude produced in and transported from the interior of the United States.

"All propaganda in favor of a tariff, an embargo or restriction of importation," he charged, "is directed against these American companies and is so directed by the very interests which are themselves to blame for the conditions against which they complain."

Statistics on Imports

Furnishing statistics to show that imports of petroleum products have declined over 23,000,000 barrels since 1921 while exports have more than doubled, increasing from 70,000,000 to 151,000,000 barrels and domestic production also has practically doubled from 484,244,000 barrels in 1921 to 950,690,000 barrels in 1930, Mr. Walker declared "the inescapable conclusion is that the condition of the oil industry in the United States will not be improved until operators in this country, including the so-called independents, cease searching for a scapegoat and face the plain truth that they have brought and are bringing their troubles on themselves, and that the remedy lies within their own power—less drilling and less oil."

The debate was brought to an end by Secretary Wilbur, who told the oil men that the board "want you gentlemen to meet this situation by doing what you can harmoniously, spending as little time as possible in reviewing past history and particularly by not playing politics." Following the conclusion of the meeting the oil producers called at the White House in a group to pay their respects to President Hoover.

A letter outlining the agreement and pledging the cooperation of the board was sent by Secretary Wilbur following the conference to the governors of the 10 states represented on the oil states advisory committee.

(*Continued on page 60*)

Senator Borah Wants Oil Industry Public Utility

Washington, D. C.—Complete federal regulation of domestic production as to both production and price, from the time crude oil is taken from the well until its products are sold to the consumer, is advocated by Senator William E. Borah of Idaho. Proposing government control of the industry, Borah this week contended that the supplying of the public with oil and its products may well be regarded as a public utility.

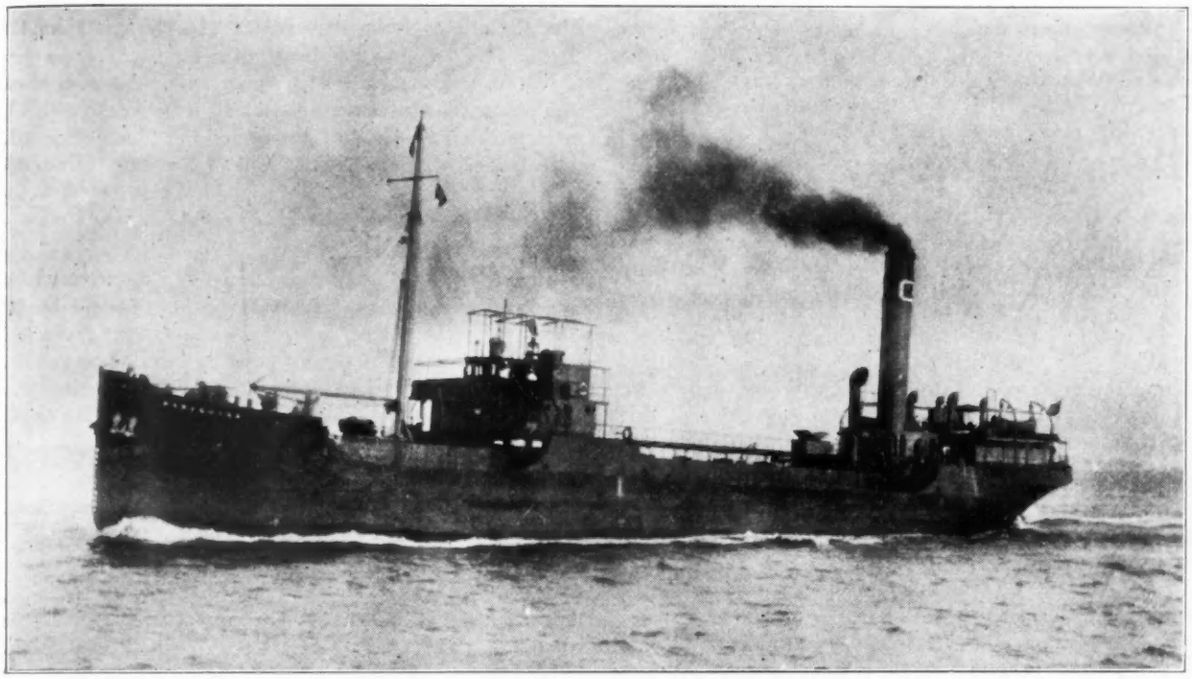
"If imports of oil are to be restricted upon the initiative and under the protection of the government, and if domestic production is to be restricted upon the initiative and by authority of the states with the approval of the government," he contended, "then the government and the states will certainly be constrained to protect the public in the price it must pay for oil and the products of oil."

Referring to the plans put forward last week for relief of the domestic oil industry, the senator charged that there seems to be no purpose in any program yet presented to protect the consumer. The fall in the price of crude, he declared, has had no effect upon gasoline except to raise the price of it so that "it seems perfectly clear that these prices were controlled."

Citing figures to show that 20 companies have about 80 per cent of the assets of the industry and produce about one-half the domestic oil output, Borah declared that "it would appear that, if the government is going to limit production and thereby augment both the tendency and the power to increase prices, any fair scheme would have to include protection to the consumers.

"In other words, any scheme would be difficult, it seems to me, in getting public or congressional approval which deals with the interest of the producers alone. Furthermore, I do not believe that the present plan, limited as it is, will save the independent producers.

"The oil interests are appealing to the states and the government for aid, but the plan is hardly broad enough. In my judgment, it is just as practicable, and quite as lawful, to treat the supplying of oil to the public as a public utility as it is the supplying of electric power."



Gulf tanker "Paraguana." Capacity 14,000 barrels

Barco Concession Approaches Compromise

RECENT developments indicate that the Barco Concession situated in the Department of Santander del Norte, an area in Eastern Colombia, in which one producing well has been drilled and in which natural exudations of oil and gas occur in abundance, may shortly be opened for prospecting. Exploitation of this supposedly fertile concession, which lies east of the Andes Mountains between the Rio de Oro and the Venezuelan boundary, has been deferred by more than a quarter of a century of litigation, political contention, international complications, and attempted confiscation.

It is known that a compromise contract for the validation of the Barco Concession has been signed between Gulf interests[1] on the one hand and the President of Colombia and the Minister of Industries on the other, but subject to ratification by the Colombian Congress. Current reports are to the effect that the revised contract has been approved by the oil committee of the senate, and that it has passed its second reading before that body. In so far as it is safe to make predictions regarding the action of any legislative body, it is said to be indicated that the house will also grant its approval before adjournment early in May.

Water from the Catskill Mountains is brought from New York in Gulf tankers and unloaded at the company's deep-sea loading terminal at Las Piedras, whence the natives transport it overland in kegs on the backs of burros

The Compromise agreement limits the area of the concession to about 1,000,000 acres, or something more than one-third its original extent. It is said to provide for the commencement of drilling within three months after final ratification. Drilling must thereafter be continued without in-

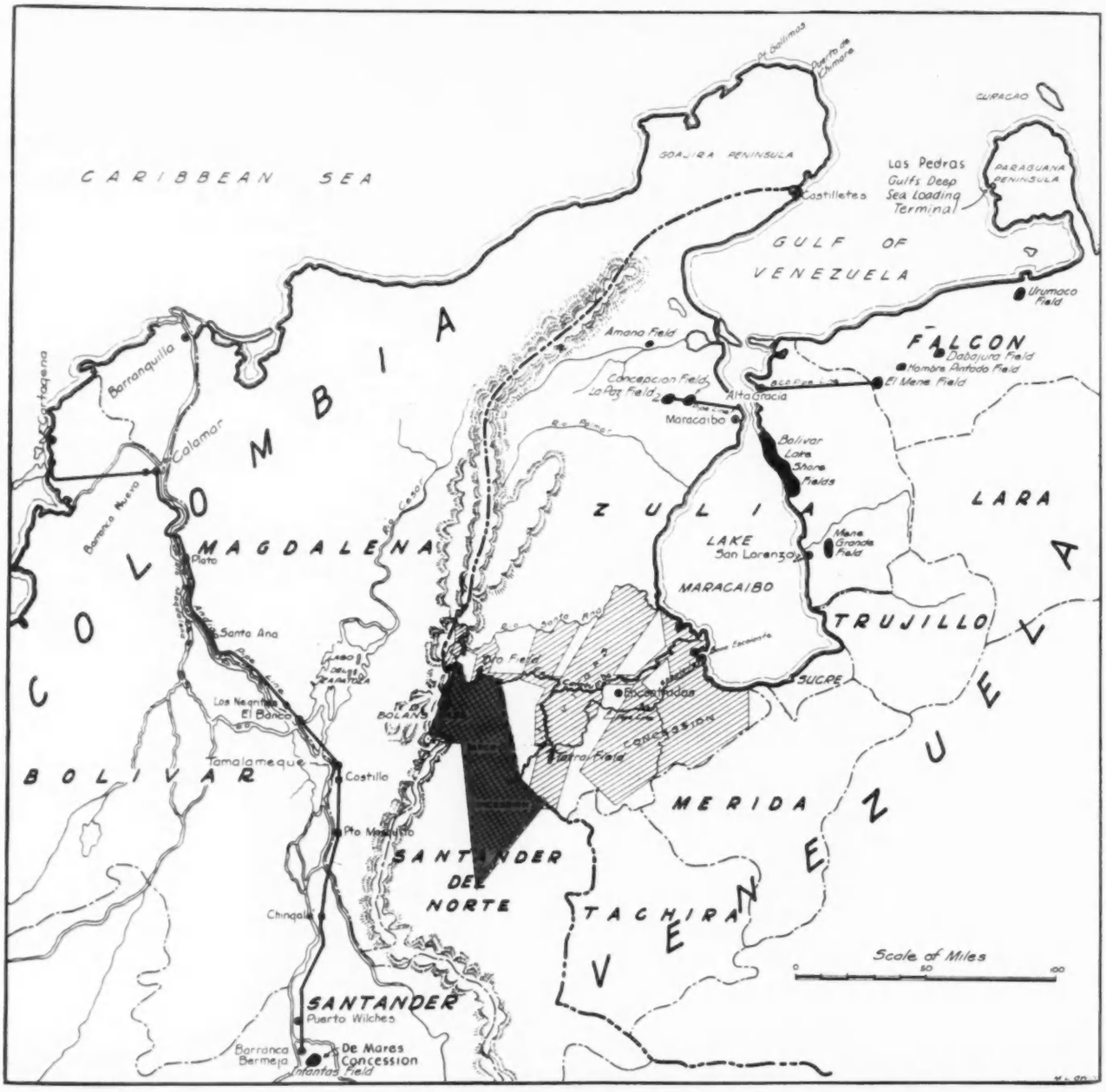
[1]Title is held, or claimed, by the *Compania Colombiana de Petroleos*, owned 75 per cent by Gulf Oil Corporation of Pittsburgh.

terruption; and, as soon as a fixed amount of production has been developed, Gulf interests must build a refinery to handle the oil. Upon completion of the refining plant, the concessionnaire agrees to sell gasoline in Colombia by wholesale at prices ruling at Port Arthur, Texas, on date of sale.

The revised contract grants to the concessionnaire the right to construct a pipe line across Colombian soil to seaboard. This clause provides for the payment of the royalty at the well, or, alternatively, at seaboard; but, unlike the revised petroleum law discussed elsewhere in this issue, it obligates the government to pay pipe line tariffs from the field to the coast.

Engineers representing the Carib Syndicate made a survey of the western approaches to the Barco Concession in 1920. Starting from the Magdalena River, they explored the Cordilleras for a distance of 25 miles and found that Bolan Pass, with an altitude of 5080 feet, is the lowest elevation at which a road or pipe line could pass through the mountains from the Magdalena River, Colombia's only avenue of transport, to the concession. Thereafter, such a line doubtless would parallel Andian National Corporation's line along the river northward to the Caribbean coast, a total length of approximately 400 miles.

Alternatively, with the consent of the Venezuelan government, a 120-mile line could be built with its terminus on the southwest shore of Maracaibo Lake, near the mouth of the Catatumbo River, where oil could be delivered into shallow-draft tankers plying between lake ports and Venezuela Gulf Oil Company's deep-sea loading terminal at Las Piedras, Paraguana Peninsula, on the north coast of Venezuela.



Map of sections of Colombia and Venezuela, showing location of the Barco Concession

—Photo by SCADTA air lines.

River steamers stranded on a sand bar, near Puerto Berrio, Colombia. The Magdalena River is Colombia's only artery of traffic. Oil field equipment is transported by such steamers from the Caribbean Coast to the interior

New Colombian Petroleum Law *Will* Retard Development

By ROY E. LEIGH
Associate Editor

THE new Colombian petroleum law, which will become effective May 10, 1931, doubtless will do greater service to Colombia's competitors in the production of oil than to the Colombian people themselves, in that it imposes certain onerous burdens which will operate to retard the further expansion of the Colombian oil industry during these times of over-production, when no additional supplies are needed in world markets. If American producers could only persuade the Russians, Venezuelans, and others of their competitors to enact similar laws, the resultant bottling up for foreign oils might relieve the increasing pressure on American export trade.

The new law does not affect the de Mares Concession operated by Tropical Oil Company, which is the source of Colombia's only commercial production to date, nor, presumably, will it seriously affect the Barco Concession claimed by the *Compania Colombiana de Petroleos* (owned 75 per cent by Gulf Oil Corporation) which is the only other property in the Republic known to be oil-bearing.

Reviewing the Colombian situation since the change of administration which occurred in 1930, one gains the impression that the chief executive, cabinet, and congress are actuated by motives very different from those which seemed to guide the former administration, dominated, insofar as its oil policy was concerned, by Dr. Jose' Antonio Montalvo, a radical politician of strong anti-foreign prejudices. Dr. Enrique Olaya Herrera, former minister to the United States, was inaugurated as president in August of last year, following what has been described as a fair and orderly popular election held during a period when other Latin American peoples were seeking political change by force of arms. Editorial comment originating in Colombia, the United States, and throughout the Western Hemisphere characterizes him as a statesman of the highest type, unhampered by prejudice or narrow partisan views.

Upon the inauguration of Dr. Olaya, the country was virtually bankrupt and without credit; and the collapse of the coffee market made it seem imperative to commence the

exploitation of Colombia's only other resource, petroleum. Dr. Olaya's reputation for integrity was such that certain external loans were speedily negotiated, and the cabinet and congress then turned its attention to the pressing oil problem.

The revised petroleum law[1] which resulted, probably represents an intention of fairness and a spirit of compromise on the part of Colombian legislators, previously misled by the radical Montalvo and unaware of their true competitive position in a world flooded with oil. It represents vast improvement over the Montalvo bills and earlier legislation; but, regretably, it retains many objectionable features, imposes many unnecessary burdens on the industry, and contains many snares and pit-falls. Many of its clauses are extremely onerous and of doubtful service to the Colombian people; and the observation of its arbitrary provisions would keep an operating company in continual turmoil and would add tremendously to the normal expense of doing business, already enormously burdensome in a jungle country lacking in transport and other modern facilities.

Protests Made

To illustrate, quoting a document of protest signed by Colombian Petroleum Company, South American Gulf Oil Company, Sinclair Exploration Company, and The Texas Petroleum Company during consideration of the bill by the congress. Appropos of chapters IV and V relating to land tiles and the granting of concessions, it was said:

"Any unfavorable view the ministry might take of a land title would inevitably result in a summary suit. As titles cannot be passed on administratively, a favorable opinion would not lead to a decision which would lend any force to the title, and every minister will send all documents to the court, even though they may be perfect and complete....

"Even though the owner win the summary suit, he would still face for an indefinite period the common law actions which the government may institute, not perhaps immediately but after oil has been discovered, and installations, pipe lines, etc., completed, whereby the detriment is greater.

"Upon the legal position of the owner and occupant being thus reversed, 95 per cent of the privately owned oil lands in Colombia would be debarred from oil production."

Article 49 provides that new concessions "will require for their validity the approval of the president of the republic, having heard the opinion of the advisory board of petroleum, and prior favorable concept of the council of ministers, and the declaration made by the council of state that they are adjusted to the legal dispositions. Having complied with these formalities, the contracts will be elevated to public documents." This procedure the protesting companies described as "so complicated and formalities so many that no contract may ever be perfected, particularly since it must go to the consulting board."

Law Contains "Joker"

Chapters VI and VII provide the following royalties, which the oil companies characterized as "very high" and "more so"; and Article 31 introduces a joker of such novelty as has never before been known in the oil industry, stipulating that royalties may be collected at the option of the government, either at the well or at seaboard. If demanded at the well, "the concessionnaire will deliver to the government the percentage which may correspond to it in accord with the (following) table, plus the quantity of crude oil which may be equivalent to the value of the transportation of said participation, from the center of collection of the producing field up to the port of embarkation of the products of the concessionnaire, according to the tariffs in force of the pipe line; the additional quantity of crude petroleum which must be delivered to the government through concept of transportation will be determined by dividing the value of said transportation by the price of a barrel of that crude petroleum in the respective fields...."

In other words, royalties are payable, in effect, at seaboard, the concessionnaire being bound to transport the government's oil free of charge; or, alternatively, if the government elects to take delivery at the well, the producer will have to pay a royalty share increased by the cost of transport which otherwise would have been incurred. "The burden is thus doubled, and increases because the government is able to demand its share sometimes in money, sometimes in kind, sometimes in both, either at the wells or at seaport, with the further obligation to store government oil."

Other Burdens Added

Article 10 imposes upon the operator the burden of storing government royalty oil, and provides that "The exploiter will replace gratuitously the petroleum of the government which might be destroyed accidently during the time that the exploiter must conserve it."

Royalties levied on oil from private lands were described by the above mentioned companies as "prohibitive" and "confiscatory," in that they apply over and above the usual lessors' royalties.

Royalties payable to the government are based on sliding scales, with respect to distance from the sea coast, as follows:

From - To (Kilometers)[a]	Percentage of gross product	
	Public lands	Private lands
0-100	11	8
100-200	10	7
200-300	9	6
300-400	8	5
400-500	7	4
500-600	6	3
600-700	5	2½
700-800	4	2
800-900	3	1½
Over 900	2	1

Article 20 obligates the contractor or lessee to produce no less than 25 per cent of the maximum capacity of producing wells, regardless of market requirements, except that the government may authorize further curtailment by special permit.

Articles 5 and 54 make it obligatory on the part of the operator to turn over to the government, gratis, geological data, aerial photographs and other documents usually regarded as of a private and sacred character. Not only that, but land owners and lessees are prohibited from taking aerial photographs of their own property, without permission of the government and without delivering up free copies of all photographs taken.

As regards pipe lines, it has been said that "The limitation of profits and the reversion of common-carrier pipe line installations to the government will make the construction of such lines impossible. The eventual approval or disapproval of private pipe lines, together with other restrictions, makes private production improbable, as free outlet and transportation for oil are not assured."

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[1]Law No. 37 of 1931.

EDITOR'S NOTE: The background of the Colombian petroleum and legislative situation has been fully covered in articles published in THE OIL WEEKLY under the following dates: May 24, 1929, page 21; June 7, 1929, page 36; September 20, 1929, page 38; December 13, 1929, page 96.

Salvage Is Important When Development Is Intensive

By J. C. ALBRIGHT

MATERIAL is money! Save it! That is the slogan of Indian Territory Illuminating Oil Company which is working at the job in the Oklahoma City field where it has large holdings, the intensive development of which has made necessary the purchase of vast quantities and varities of materials, also the reclaiming and reconditioning of much material in order that it can be re-used.

Pipe, more pipe. Casing and more casing. Gates, large and small. Master gates. Big forged and cast steel gates. Blow out preventers. Steel crosses, chokes, flow beans. Oil and gas separators and tankage. Not to mention the thousand and one other items which are used in an oil field. Timbers, walking beams, main and mud sills and Sampson posts. All of these items are either reconditioned or converted to other uses.

The reconditioning is carried out under three major divisions. First is the line pipe and casing; second, the gates, valves, chokes, flow nipples and christmas tree fittings, and third, the discarded rig timbers salvaged from the field, or those which have been replaced with steel.

The line pipe is gathered from all leases in the district, racked according to size and condition. After each lease is cleaned of all its surplus pipe—and they are kept in that condition excepting at times when changes are being made on well connections—or in gas lead lines to the casinghead gasoline plants or gas lifts, the pipe is transported by truck to the pipe yard where it is racked convenient to the traveling crane leading to the pipe shop.

It is sorted again by a pipe inspector. The crooked joints of small pipe are straightened in a hydraulic machine built for that purpose and placed just outside the machine shop. Two men operate this machine, one steering the joints into the press while the other regulates the pressure by controlling the amount of oil delivered to the press. The pipe is placed in the press with the bends uppermost, the operator manipulating the joint so as to feed the pipe through converting it to its original condition.

Pipes Re-threaded

If the joint has bad threads, these are cut off with a Landis pipe machine and new ones re-cut. If the joint cannot be reconditioned into useable length it is cut into standard length nipples by putting through a nipple machine which cuts the threads and reams the inside at one operation. Any standard or special length nipple including the all thread may be made in this machine.

The three, four, six, eight-inch and other large line pipe are put on one of three other Landis machines which cuts off the old threads then new ones are run on by bringing the dies onto the end of the pipe. All collars and thread protectors have been saved and placed in large bins in the yard for future use. After the pipe has had new threads cut, collars are bucked on and thread protectors placed in them as well as on the threaded end of the pipe.

It is then piled in racks near the shop convenient to the truck alley for distribution over the field, or is transported to the permanent pipe racks. Each joint is carefully meas-

Part of the gates and other fittings ready to be reconditioned at Indian Territory Illuminating Oil Company's Oklahoma City District warehouse

Indian Territory Illuminating Oil Company's Oklahoma City pipe yard showing salvaged pipe ready to be reconditioned

ured and arranged systematically, with the footage, weight and condition either stenciled or painted on it.

Casing is handled in much the same manner. The new specification pipe, especially the A. P. I. class "D" high manganese 95,000-pound, tensile strength, seamless casing is carefully handled throughout the entire reconditioning process.

Gate Valves Reconditioned

Hundreds of gates have been brought in from the field with the valve seats roughened and pitted, the wedges eaten away or damaged by the flow of oil or gas containing dirt or sand, are reconditioned, tested and placed in practically as good condition as they were when new.

All these gates, as well as other fittings are first put through the sand blasting room, in a separate building near the machine shop. There are two rooms in this building; the one to the north houses the boiler where the sand is dried. Ordinary river sand is used; it is elevated after screeening to the drying pan above the barrel of the boiler, where the radiant heat dries it of its moisture content. As needed, the sand flows down a chute through the partition wall to the sand blaster, falling on a screen above the sand magazine where it is again screened to separate all the large grains, pebbles, etc.

A low platform has been built to hold the article being cleaned. It is made of two-inch pipe securely cross-braced with legs welded below each corner, under which have been placed heavy duty castors. The heavy equipment is handled with a chain hoist attached to the crane, while the lighter fittings are placed on this truck by hand. After enough fittings have been placed on it, they are pushed into the sanding room onto a sheet of boiler plate placed in the center of the room to prevent the cement floor from being cut away by the force of the air-driven, sand grains.

Mask Worn

The sand blaster wears a mask to purify the air that he breathes. A heavy canvas hood is fastened around his head and neck, extending down onto his chest to prevent the rebounding sand grains from cutting his flesh.

The room is partially sealed by securely closing the door. A roll of burlap bagging is placed at the bottom of the door to prevent the sand grains from coming from under it and injuring any workman who may be passing while the equipment is in operation. The dust and fine particles of rust and sand from the air are drawn from the room by the use of a motor-driven, exhaust type fan placed in the wall at one end and near the ceiling, at the same time providing fresh air for the operator.

The operator then turns on the air which operates the sand blasting equipment, thoroughly removing all the old paint, grease, oily incrustation and dried mud from both the outer and inner surfaces of the equipment which he has on the table. The article is so thoroughly cleaned that the original silver grey finish of freshly cleaned iron is produced.

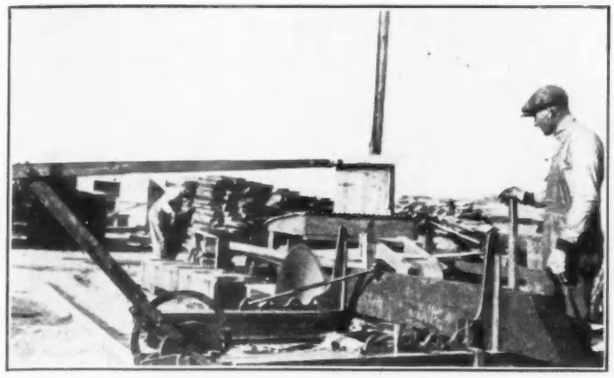
After he has completed the job, he shuts off the sand supply and blows all the dust and sand from the more inaccessible crevices. Then he shuts off the supply of air and the doors are opened. The operator removes his protective shield and mask in order that he may thoroughly inspect the piece of equipment to determine whether the dirt and paint have been removed. The helper hooks a chain into the loops or eye bolts, or takes a turn or two around the heavy piece, connects it to the hoist on the crane and guides it to the machine shop where it is torn down for inspection.

If the piece is one of the large master gates, the packing gland is removed, then the bonnet bolts are taken out so that it may be removed from the valve stem. The bolts are laid aside to be cleaned by a motor-driven rotary wire brush. The body of the gate which is securely chained to a heavy cradle fastened to the concrete floor is inspected for possible flaws. These can be readily detected owing to the clear finish given it by the sand blasting operation.

If nothing is found other than worn valve seats and wedges, the wedge is taken to the grinding machine. Three Cleveland "Cleco" Number 3 pneumatic occilating granders are placed on a long bench near the windows. The operator of these machines places the wedge under the grinder. The wedge is blocked up until its upper surface is on the same horizontal plane with the grinding plate.

Grinding Compound Applied

Carborundum grinding compound is applied to that part of the wedge that constitutes the bearing surface next to the valve seats. The plate which is made of mild steel, having a stem fastened to the upper side, which is con-



The saw rig cutting timbers into lumber

nected to the machine with a telescopic and a universal joint is lowered onto the wedge. The operating mechanism is started and the wedge is ground.

After it has been ground to a flat surface on both sides, it is taken back to the gate body and the stem placed in it. Two men rock the wedge back and forth in the seat, occasionally lifting it to allow the compound to become redistributed. When the seat and wedge have been ground to an apparent fit, the gate is reassembled.

A testing machine has been constructed by reconditioning a used triplex pump. A rack has been built which will hold three gates for testing. The gate is moved to this test rack where connections are screwed into the body or flanges. These are connected to the hydraulic lines from the pump, which uses kerosene as the testing medium. Pressure is applied until 4000 pounds is reached. If neither side leaks, the gate is removed to the paint rack, painted immediately and is then ready to be placed in service again.

If by the eroding action of the fine sharp sand which is produced with the majority of the oil from the wells in this field, the gates are so badly damaged that the grinding of the wedges and seats will not bring them back into usable condition, the body is taken to the welding shop, where the seats are built up by the application of electrically deposited. metal. The re-built body is taken to the shop again where the surplus metal is machined away so that by the addition of a new wedge, the gate is placed in usable condition again, expecting of course, the regrinding. No matter how well the machine work is done, the regular procedure of grinding in the wedge is followed.

Two-inch gates are reconditioned at a reasonable cost. usable condition again, excepting of course, the regrinding. worth the reclamation. This company made a special study of reconditioning them, and 25 gates were put through the shop and a close check made of all the material entering into them.

Since that time, all gates and valves are thoroughly inspected. Those of a kind are placed in separate rows. Lunkenheimer clips, King clips, Powels and any other make apart, the broken bodies of some are thrown aside. The broken bonnets and cracked wedges of some of the others may need to be discarded. But with the salvaged parts of several gates, enough parts are usually found from which there may be assembled several good ones. The wedges are always ground into the seats, the body to bonnet gaskets replaced with new ones, stem packing is put in and the gate or valve is painted, placed in the warehouse to be used again.

A part of 400 gate boxes made from salvaged rig timbers

Salvage Rig Timbers

The third subdivision of the reclamation department dealing with the salvage of rig timbers is situated in the north end of the yard. All the blocking, wood walking beams which have been replaced with steel ones, Samson posts, main and mud sills, derrick sills, etc., are brought in and piled. A small saw rig operated with an electric motor has been installed.

The salvaged material is brought to the saw from the piles by a catapillar crane. Several pieces are placed in slings and are dumped to one side where workmen with bars, hatchets and nail pullers remove all the metal parts. When the pieces have been cleaned of all nails and bolts, they are rolled down to the traveling platform which is a part of the rig, fastened in the same manner that a log is after it has been stripped of the slabs of bark.

Pile of salvaged timbers ready to be sawn into usable lumber

All pieces regardless of their dimensions, are cut into usable lumber. Usually the piece is cut into two by six or wider dimension lumber. Any piece from 36 inches in length up to the longest piece of rig timber that is used is run through this saw rig. Over 100,000 board feet of good lumber have been cut from this pile of rig timbers. Usually these are left in the field or piled and burned.

Throughout the winter, frost boxes were needed to protect water connections, gates and other exposed controls over the field. Instead of buying new material, over 400 of these boxes have been constructed from this material which has been salvaged.

The salvage of this class of material was undertaken with two objects in view. That of providing work for men who otherwise would be out of employment, and the utilization of material that would otherwise waste in the field.

The cost of operating the saw rig is nominal. By calculating from the price of new lumber, it is readily seen that the amount in board feet which has been salvaged represents quite a monetary saving.

History – Geology – Mechanics

Ritz-Garrett-Decker Area

McPherson County, Kansas

By FLOYD SWINDELL
Staff Representative

LATE in 1930 Shell Petroleum Corporation found itself with a highly prospective core drilled block consisting of 26,000 acres in the Ritz-Garrett-Decker area of McPherson County, Kansas. Part of this was proven and most of which was composed of five-year leases that would expire early in 1931. Under the existing conditions it did not feel like entering into the extensive campaign which would be necessary to fully test the area. Truly, it is an ill wind that blows nobody good. Here was a gas structure which gave promise of producing gas in large quantities and oil farther down the flanks, and an oil structure which had good possibilities for extensions in the "chat" horizon and which was practically an unknown quantity in the Viola lime, although that horizon was held in high regard. A big outlay of cash was necessary to fully test such a large area. On the other hand there were a number of drilling contractors and independent companies who had tools on the rack. The two got together, resulting in activity which now leads the state of Kansas both in number of operations and in the size and importance of completions.

The plan, which is commonly called "farming out," is accomplished through the assignment of leases by the Shell Petroleum Corporation which retains an overriding royalty based on a definite fraction of the working interest or on a sliding-scale based on the size of completed wells. In this way Shell Petroleum Corporation is getting a thorough test of its block and at the same time sharing only in the oil and gas that may be obtained. Expensive dry holes, which are sure to be drilled before the area is completely defined, will play no part in its determination of profit or loss. Likewise, the operator of a lease so assigned has had the advantage of Shell Petroleum Corporation's core drill information, thereby eliminating some of the element of risk and he is assured of a proportionate part of the outlet through Shell Pipe Line Company's line.

Topography

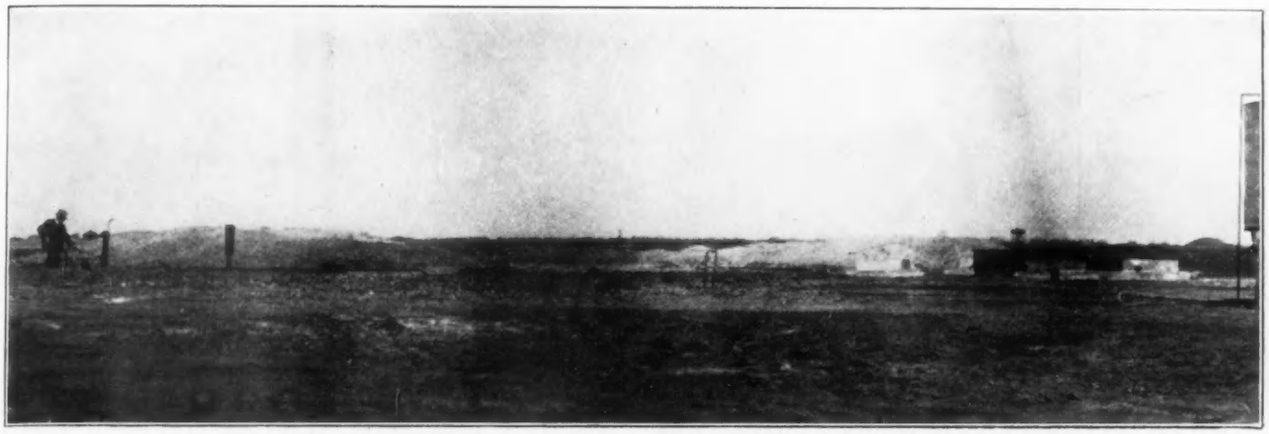
The area is typical of the Central Kansas Basin, consisting of a practically unbroken plain which dips at angles that are almost imperceptible to the eye. Black Kettle and Crooked Creeks drain southward into the Arkansas River but no major drainage lines dissect the four townships in which present development is located. The landscape is devoid of tall vegetation with the exception of hedge fences that commonly mark property lines.

GEOLOGY

Stratigraphy

No serious attempt has been made by operators to subdivide the section through a careful study of formation samples and the little work that has been done is based on driller's logs. However, since all but a few wells have been drilled with cable tools, the information so revealed is more dependable than usual. A careful subdivision is not attempted herein. The section does not differ radically

Garrett Sector-Mid-Kansas Oil and Gas Company's Garrett 1, *discovery well in the Viola lime horizon in the center background*



Typical hook-up on gas well. Well head connections are enclosed. A drip made of three joints of old casing serves to trap casinghead gasoline which is blown into the tank on the extreme right

from that encountered in the Voshell pool which is located about 10 miles southwest. In the general territory beds of Tertiary age outcrop in irregular patches. Surface sands, gravels and clays in the area under discussion, appear to be of that age. The Wellington formation, which is the upper division of the Big Blue group of the Permian system, is represented by 400 to 500 feet of vari-colored shales and thin gray limestones or sandy limestones. The Marion and Chase formations consist of red, blue and gray shales and thick gray limestones. The Fort Riley limestone member occurs as a massive gray or buff lime at a depth of about 600 feet. Several wells have reported small showings of gas slightly below 600 feet in the Chase formation. Beds which occur at about 1000 feet are tentatively correlated with the Council Grove formation, the basal member of the Permian system, which rests unconformably on the underlying Pennsylvanian system.

No distinct lithologic break occurs between the Permian and Pennsylvanian systems and it is impossible to definitely place the contact between the two. In general the limes are less cherty and the section contains more sand. The Topeka lime is encountered at an approximate depth of 1700 feet below the surface and the Kansas City-Lansing formations either a few feet above or below 2300 feet. This part of the section is composed of more than 300 feet of somewhat massive hard gray limestones separated by relatively thin beds of soft blue shales with occasional red shales. Several members of the formations are highly porous and contain abundant fauna. The Marmaton formation of Southeastern Kansas consists of dark colored shales and thin limes with an occasional lenticular sandstone. In the Salina Basin these colors become dominant. Limestone and sandstone remain a minor part of the formation. The Cherokee shale is absent in the northern part of the basin and only its uppermost part is present to the south. This portion resembles the Marmaton very closely, consisting of gray, red, and green sandy shales and some conglomerate material.[1] A large per cent of the drillers' logs report variegated shales directly above the "chat" and a few have reported sand and sandy lime. This shale appears to be upper Cherokee and the sandy phase may represent Bartlesville, which produces in the southeastern part of the state.

The upper producing horizon, commonly known as the "chat" or "Mississippi lime," is an old eroded surface formed during truncation of pre-Pennsylvanian formations. In the upper part it is conglomeratic, being composed of water worn pebbles of pure chert or cherty limestone imbedded in a mass of somewhat porous chert and cherty limestone. Laterally it grades into pure lime but almost the entire Mississippian section appears to have been altered through erosion. Directly below the Mississippi lime 200 feet or more of light colored shales are encountered and the driller's Viola lime at about 3400 feet.

New terminology applied by Barwick[2] to formations below the Mississippian have not been generally accepted and the terms as applied in the field are used herein. Production from the lower horizon is obtained from a break in the Viola lime which is itself reported as being sandy. One well which is nearing completion in that formation had 3000 feet of oil in the hole with a reported penetration of only six inches into the lime. This lower sandy phase is locally called "Wilcox" but it appears doubtful that it can be correlated with the Oklahoma "Wilcox."

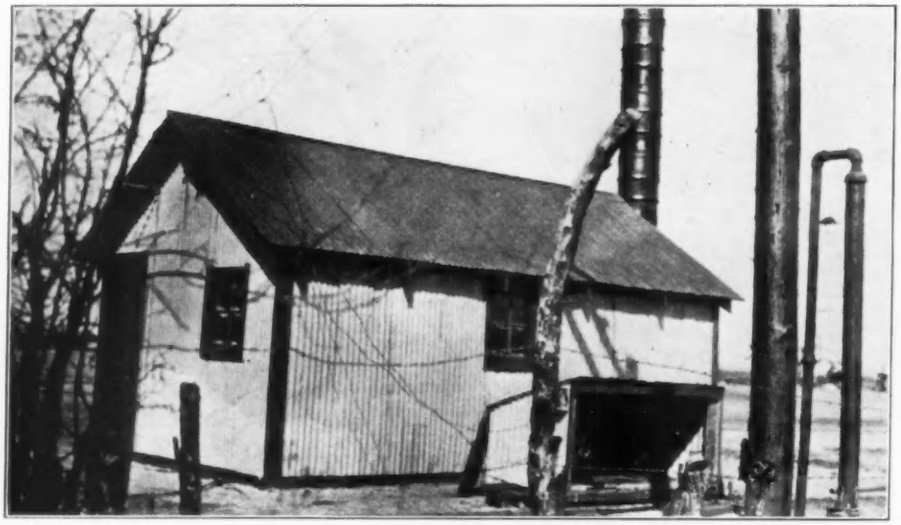
As heretofore pointed out, the writer has been unable to secure information based on careful sample study and the correlation here suggested should be considered only as tentative. Several of the companies now drilling in the area have signified intention of carrying on a sample study at least through part of the section and a more comprehensive report may be prepared in the future. Two features appear outstanding as compared with conditions encountered within a radius of a few miles. The section is remarkably devoid of sand in appreciable quantities and the limestones, which make up a large percentage of the 3000 to 3500 feet that must be penetrated, are comparatively soft as shown by the speed with which they can be penetrated by cable tools.

Structural Conditions

Considerable confusion has existed in regard to structural conditions particularly in the Garrett sector and to the northeast of it. The area lies in the southern portion of the Salina Basin, approximately mid-way between the Barton-Chautauqua Arch and the Nemaha Granite Ridge, both of which are major structural features. The Abilene Anticline strikes northeast-southwest through it, roughly paralleling the Nemaha Ridge. Structural determination is doubly difficult because of the fact that one must deal with the topography of an old erosion surface in addition to the structure. Early in the history of development it

[1]Barwick, J. S., "The Salina Basin of North-Central Kansas," A. A. P. G. Bulletin, Vol. 12, Pt. 1, Pp. 177-199.
[2]Op cit.

SEE SPECIAL INSERT MAP AND WELL DATA ACCOMPANYING THIS ISSUE



Boiler house and circulating pump used in connection with treating oil on Amerada-Stanolind Flook lease. This small pump circulates hot water for two treating tanks. Old 55-gallon steel drums have been welded together and are serving as a smoke stack

was believed that the Decker and Ritz pools were on different structures, separated by a saddle. Recent completions in the saddle area have found top of the "chat" high, leading to the belief that both pools possibly may be on the same structure. General tendency has been to map both structures with the crests on a northwest-southeast line. Data are too meagre to determine the strike of the structure upon which wells in the northeastern part of the area are located. There occurs the possibility that the alignment may be in a northeast-southwest direction which would place the Ritz pool and the Garrett-Kaegi production on one high and the Decker gas field on a separate structure running parallel to it. Since the information available at this time does not justify a complete structural map no attempt is made herein to present a detailed picture of structural conditions. However, present drilling wells will play an important part in ironing out the difficulties that now exist and it should be possible to fully contour the area within a short time.

Location

The area is located approximately 12 miles east of McPherson, in east central McPherson County, and within about 30 miles of the geographical center of the state. Two well maintained graveled highways make it easily accessible. Highway 50 passes through the field from McPherson to Kansas City and highway 81 leads southward through Newton to Wichita, a distance of about 60 miles. The Rock Island and Santa Fe railroads have lines that pass about mid-way between the Decker and Ritz pools.

History of Development

In December, 1927, Merriman, Reeves et al completed a dry hole on the Clark farm in Section 8-19s-2w, approximately 1½ miles south of the old McPherson gas field and two miles west of what was later to be the Decker gas field. On July 2 of the following year Gurley and Lamer abandoned Paulson 1, SE SE NW Section 6-19s-2w, at 3545 feet after obtaining a small showing of gas in the "chat." No further activity was initiated until April 6, 1929, when McPherson Oil & Gas Development Company and Shell Petroleum Corporation spudded O. A. Ritz 1, NW SE SW Section 1-20s-2w. Nineteen days later the same operators commenced drilling in Decker 1, cSE Section 11-9s-2w, over five miles northwest of the first test. O. A. Ritz 1 was completed July 3, 1929, in "chat" at 2935 to 2966 feet, gauging 368 barrels the first one and one-half hours. Eleven days later Decker 1 came in as an 18,000,000-foot gasser in "chat" at 2887 to 2914 feet. Both were discovery wells on the two structures. The first important extension came when the same operators completed Ritz 2, in the southeast corner of the 160 acres. Although the extension was for but a short distance it was important because of finding the pay horizon only one foot structurally lower and because of its 2210 barrels initial gauge. Drilling which followed during the next few months was based mostly on offset requirements. By the end of 1929, six oil wells and one gas well had been completed in the Ritz pool and three good gas wells were shut in in the Decker field.

Mid-Kansas Oil & Gas Company was the first to find commercial production in the Viola lime horizon when it completed Garrett 1, SW SW NE Section 30-19s-1w, approximately 2½ miles northeast of the "chat" discovery. Initial gauge was 3328 barrels cutting three per cent from Viola lime topped at 3407 feet and drilled to 3415 feet. W. C. McBride, Incorporated's Whitwright 1, NE NE SW Section 30-19s-1w, southwest offset to the Garrett, had been producing for several months from the "chat." Upon deepening to Viola at 3414 to 3421 feet, it gauged 2054 barrels the first 24 hours.

Drilling Methods and Problems

With the exception of about eight wells, all drilling has been done from top to bottom with cable tools. The rotary method is not well adapted from an economical viewpoint and considerable difficulty has been experienced in several tests in getting through the Kansas City lime series, principally due to the difficulty in maintaining mud returns. When the rotary method is used a string of 8¼-inch seamless casing is landed on or near the top of the "chat" and cemented with 200 to 250 sacks of cement usually mixed with some kind of an accelerator. Particular care must be exercised in regard to condition of the mud fluid especially when nearing the "chat." A heavy viscous mud will usually eliminate the danger of losing returns at this point.

Gas, gasoline, or steam, portable or stationary engines or electric motors furnish the drilling power and a varied assortment of wood and steel derricks have been used. As mentioned in the opening paragraph, most of the tools are owned by the companies who have secured acreage from

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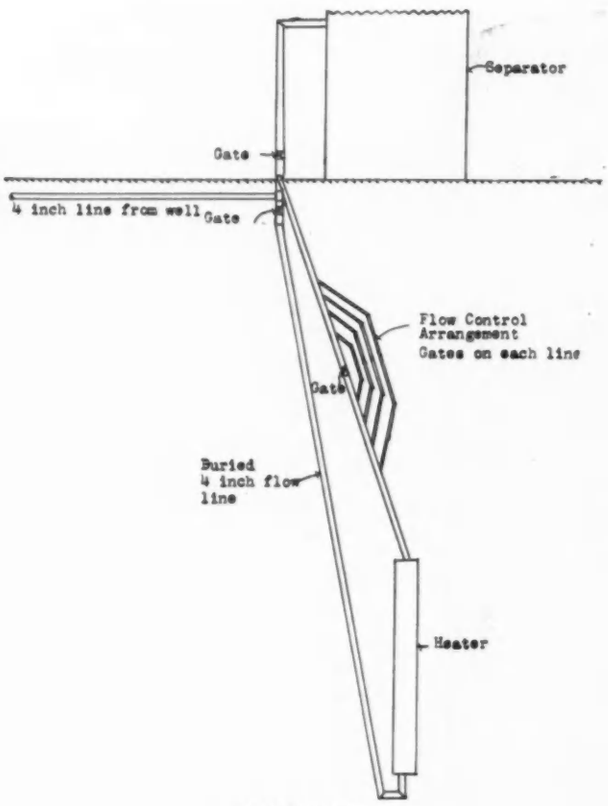


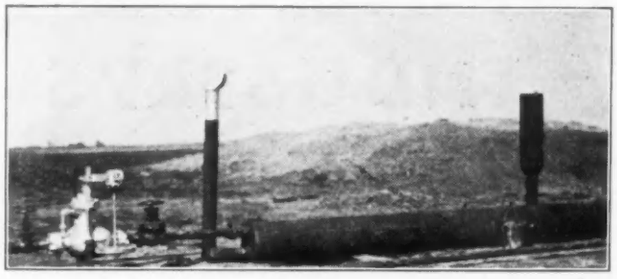
FIGURE 1
Flow device used on Younker et al's Gratton well

Shell Petroleum Corporation on "farming out" agreements. This condition necessarily has brought into existence many economies not found in the usual pool. Casing practice varies widely. Of the numerous water "zones" encountered, three yield water in quantities sufficiently large to make casing off necessary. The first is encountered between 1600 and 1700 feet and 12½ casing is usually set below it with a formation shut off. The second is found between 1800 and 2200 feet requiring another string which is usually 10 inch. The third is between 2400 and 2550 feet below which 8¼-inch has been set in a large number of the early wells. This is the last water of any consequence between that point and the top of the "chat." In the event that 8¼-inch casing is set at this point 6⅝-inch is landed at or near the top of the "chat." The present tendency, since a number of wells have failed to find production in "chat" but have been successful in the Viola lime horizon, is to reach the "chat" with 8¼-inch casing so that 6⅝-inch can be used to continue to the Viola lime horizon. This practice involves carrying the 8¼-inch for several hundred feet as drilling progresses and in a few instances imperfect water shut off on this string has caused considerable delay through inability to make the tools hit bottom in a hole full of water. The entire section contains soft blue and black shales which cave readily. Notable among the caving troubles that have been reported are the shales between 2065 and 2210 feet, 2565 to 2615 feet, and the variegated shales that directly overlie the "chat" horizon.

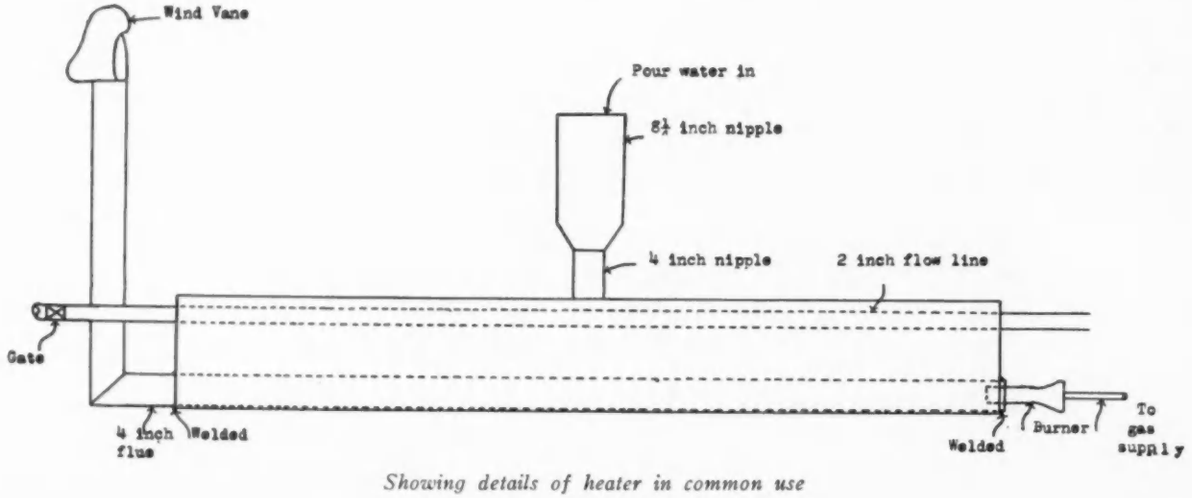
When commercial production is not found in the "chat" and drilling is continued to Viola lime, it has been customary to permit the well to stand shut down for several days before commencement of drilling deeper. In many instances the "chat" water drowns out this horizon but it is sometimes necessary to introduce water from the surface. If this practice is followed and seven-inch outside diameter casing is set in an eight-inch hole on or near the top of the Viola lime, approximately 50 sacks of cement will be required to fill behind the casing to a point above the "chat."

Production Methods

A study of production records from the pool from its beginning to March 1 does not present a true picture of the possibilities because of the fact that proration rules have been rigidly adhered to since the first well was completed. Many of the potential gauges were taken while producing against a back pressure. A majority of the wells flow upon completion but a large number require swabbing. The field is erratic in regard to flowing life of "chat" wells. In a few instances early installation of pumping equipment has been necessary. All of the "chat" wells are making water in varying amounts and must be treated

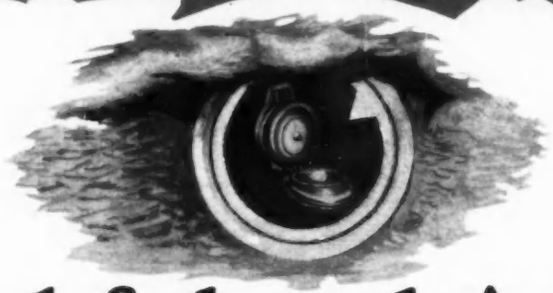


Popular type of home fabricated heater showing regulator end



Showing details of heater in common use

Eagle-eyed



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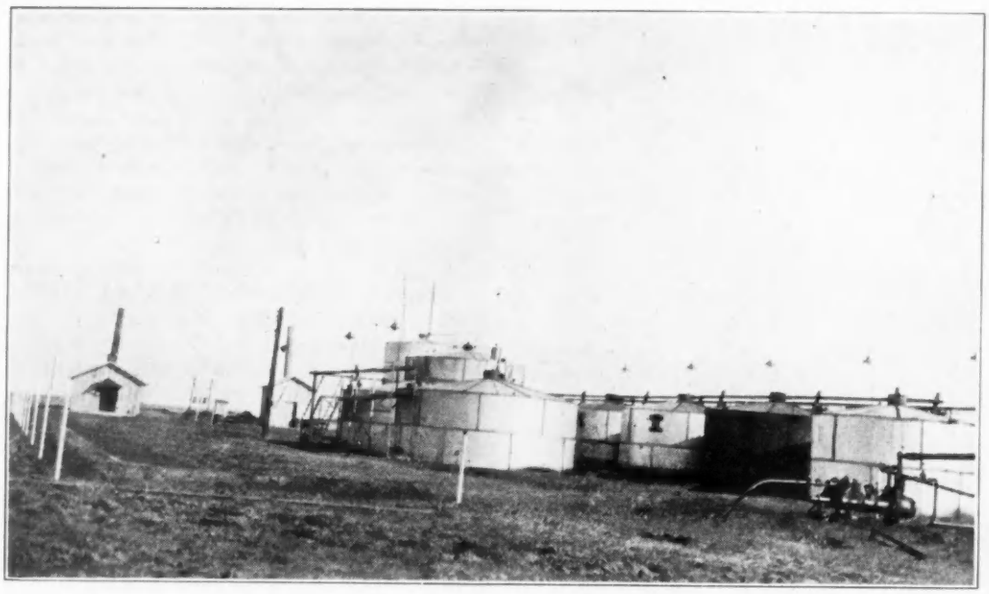


All tank batteries are efficiently lighted. Mid-Kansas Oil & Gas Company's treating boilers in left background

both with heat and chemical. Up to March 1, 35 wells had produced a total of 2,127,978 barrels from an estimated drainage area of 1000 acres, giving 2128 barrels per acre, which is favorable in view of the restrictions that have been placed on the pool. The approximate average recovery per acre for all sands in Kansas is 8500 barrels, a figure which was established before curtailment of production became necessary.

Flowing equipment is varied in its design due to the wide difference in the condition of wells, some of which are primarily oil wells and make only small amounts of gas while others are gas wells making small amounts of oil. In practically all instances some type of flow bean is employed at the surface. Gas wells on production deliver through the meter at 250 to 300 pounds, pressure being controlled by a regulator. Differential pressures on the two sides of the regulator sometimes are as high as 600 pounds per square inch, producing a refrigerating action which makes heating necessary. All heaters are home fabricated and a number of novel designs have been originated. One type which is popular is made from a joint of 12½ or 15½-inch casing with a head welded into each end. The two-inch flow line is welded into each head so that it passes through the length of the heater, near the upper inside surface of the pipe. A joint of four-inch is welded in a like manner near the bottom, coming out to a riser on the regulator end and being equipped with a wind vane which promotes efficient heat draft. A short three-inch nipple is welded into the heater near the middle, projecting upward about 12 inches. This is in turn swaged welded into a short piece of larger pipe. The joint of four-inch which passes through the heater acts as a flue from the burner. When all connections have been made the heater is filled with water and the fire turned on. This gives a uniform even heat which is transmitted to the gas as it passes through, thereby preventing freezing at the regulator due to expanding gas.

Because wells make water, one operator has devised a simple arrangement for restricting both the flow of gas and oil without passing it through the ordinary type of bean. This was done on the theory that the bean type of flow might promote emulsion. Figure 1 shows the arrangement. Gas and oil come from the well mouth through a four-inch flow line to a point near the separator where it runs into a three-way T. A gate is installed above the T. so that the flow may be conducted downward and through the heater or upward through the trap without being heated. This provides a by-pass should the heater or flow device need repair at a time when the well is on production. After the flow has passed through the heater it may go directly through the four-inch flow line to the separator or it may be restricted by the use of any one of the four welded lines which vary in diameter from one-half to one-inch. Each is equipped with a valve so that a wide range of control is provided.

Treating of Oil

As mentioned heretofore, all "chat" wells are making water, some of which do so from the start. Every operator in the pool has some type of treating plant and all are using chemicals. Severe winter weather combined with a rather difficult emulsion has made heating necessary. One plant which is fundamentally the same as all others but which has several refinements not found elsewhere will be described. Three wells on the Amerada Petroleum Corporation and Stanolind Crude Oil Purchasing Company's Flook lease produce into two batteries of tanks. The lease is operated by Stanolind Crude Oil Purchasing Company which designed the plant under consideration. The plant is located about mid-way between the two batteries. Chemicals are injected into the flow line at the wells by means of a motor driven force-feed pump especially designed for the purpose. This insures a steady injection of known amounts of treating fluid. Each battery of tanks is equipped with a treating tank. The flow line is welded into a joint of large pipe several feet down from the top. Oil passes downward entering the tank at the bottom where it is distributed through a number of short sections of two-inch pipe which radiate from the middle of the tank to points near the circumference. Each is slotted with a hack saw to permit a wide distribution of oil as it comes into the tank and bubbles upward through warm water. On the outside of the treating tank, at the point where oil drops downward to enter the bottom, any free gas is permitted to flow upward and into the top of the tank. This makes

a continuous vapor-tight system which conserves all of the lighter fractions. Water is heated by a reconditioned boiler set in a house between the two batteries. Water enters the bottom of the boiler on the back side and leaves through the dome. Circulation is provided by a small electrically driven pump which is set in a small shed alongside the boiler house. Valves on each side of the pump permit its use for either of the batteries. Temperatures range up to 175 degrees and are controlled by a thermostat which is connected to the fuel supply line and into the fire box end of the boiler, thereby providing a uniform temperature and preventing the possibility of burning the boiler in the event that the water line should become disconnected. Salt water is drawn from the treating tanks and run to a pit between them. A small line injects gas into the pit below the normal water level so that it may be burned at the surface of the water to hasten evaporation, a simple but effective method for disposing of salt water.

History of Proration and Market

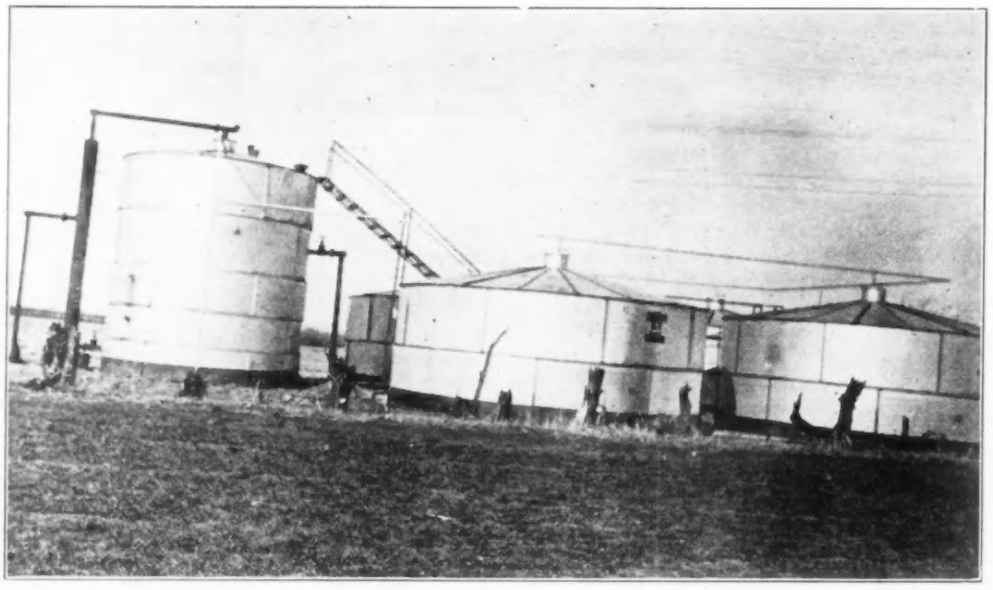
Proration of "chat" production in the Ritz pool was commenced on November 6, 1929, approximately four months after the discovery well was completed. From that date until March 12, 1930, the pool was prorated to 50 per cent of its potential. A decrease in the market demand at that time forced a plan of 50 barrels per day per well which was kept in effect until May 1, 1930. During the period from May 1 to July 1 the 50 per cent of potential plan was again used. Since the latter date the pool has been restricted to market demand which has ranged from 3500 to 7000 barrels per day, allowing the area to produce from 46 to 13 per cent of its potential. It has had drilling restrictions from the date of the discovery well and operators have followed the policy of limiting their drilling activities so as to meet only the necessary obligations. Until February 15, 1931, proration was by wells at which time a unit plan was adopted and the Garrett area included with Ritz. The Garrett pool, which produces from Viola Lime or "Wilcox," had until that time been pinched to 50 barrels per well per day. New 12 hour potential tests will be taken beginning on April 1, 1931, under an agreement which also specifies that all wells spudded after March 17, 1931, will be allowed a 24-hour potential test after which they will be shut in for 30 days. Pipe line demand is estimated at 6400 barrels daily.

Shell Petroleum Corporation has a six-inch line which connects with its Voshell line about 10 miles to the southwest. From that point it has a four-inch line to its refinery at Arkansas City. It also has a 13-car loading rack alongside the 10-car rack of Stanolind Crude Oil Purchasing Company. Other outlet is through a line of the Prairie Pipe Line Company which is not now a regular purchaser and moves only such oil as is tendered to it.

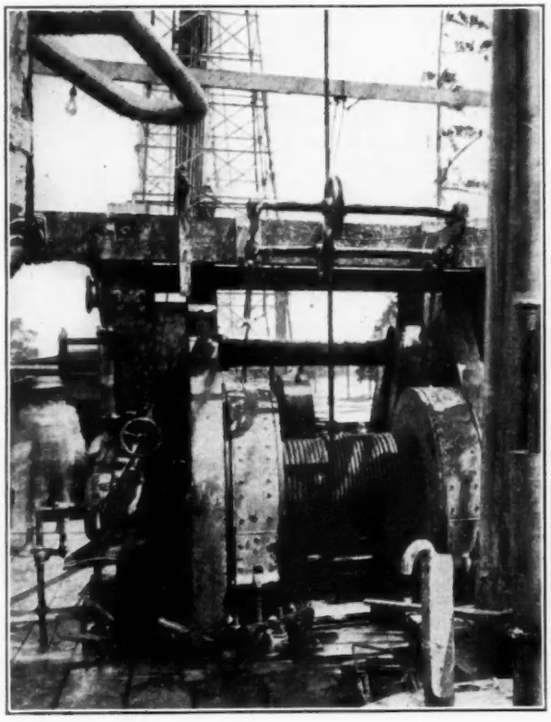
Conclusions and Acknowledgements

Thirty-two completed gas wells in the Decker field have an estimated potential in excess of 400,000,000 cubic feet daily and 35 oil wells an estimated potential of 48,000 barrels daily as of March 1. Both structures have wide possibilities both for extensions in the "chat" and for deeper production. On the basis of present conditions it is not unreasonable to assume that the ultimate number of completions will reach a figure at least double the present status. However, with all operators acting in the harmony which has been manifested in the past, a slow development of the area can be expected.

Special thanks are due the operators who cooperated splendidly in the matter of the field study and to the geological departments which advised on structural and stratigraphic conditions.



Treating Tank and Storage Battery on Amerada-Stanolind Flook lease. Connections on the extreme left permit oil to drop and gas to rise in the vertical joint of 12½-inch pipe. The system is vapor-tight



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While saving, they serve in many ways . . . guarding against breakdowns and delays . . . standing up under severe operating conditions without adjustment or attention for long periods . . . reducing lubricant and lubrication.

This matter of upkeep is important. From whatever angle you consider bearings . . . long life . . . efficiency . . . economy . . . upkeep tells its story. Look into the saving way of Hyatt Roller Bearings. Hyatt Roller Bearing Company, Newark, Detroit, Chicago, Pittsburgh, Oakland.

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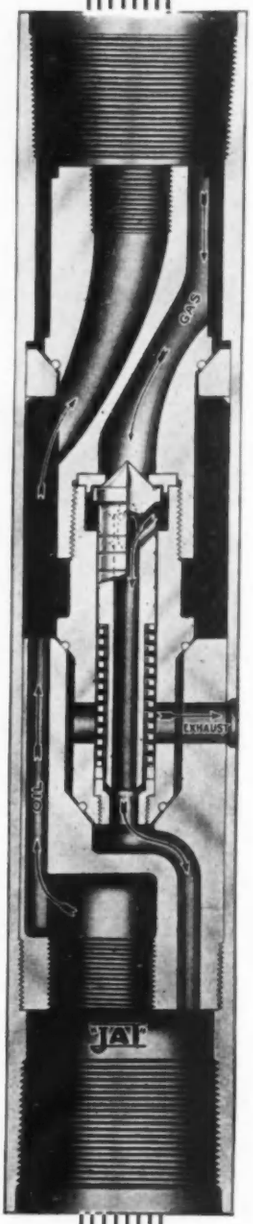
PRODUCT OF GENERAL MOTORS

"JAT"



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THE ADVANTAGES OF "JAT" DISPLACEMENT PUMPS ◆ ◆ ◆

Will pump wells of any depth—crooked or straight.

Low lifting cost.

Increased production—due to continuous operation.

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Eliminates frequent pulling of wells.

Can pull vacuum or hold pressure on formation when the need arises.

Permanence of compressor plants assured.

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Descriptive Bulletin No. 90 sent on request.

THE NATIONAL SUPPLY COMPANIES

Diesel Generated
Electric Power Practical
For Deep Drilling

By LESTER C. BLACK
Buck & Stoddard, Inc., Los Angeles, California

FOR many years the engineering departments of oil operating companies have sought to develop an economical source of power for deep well drilling practice, and at the same time retain the reliability and flexibility desired in work of this kind.

LESTER C. BLACK

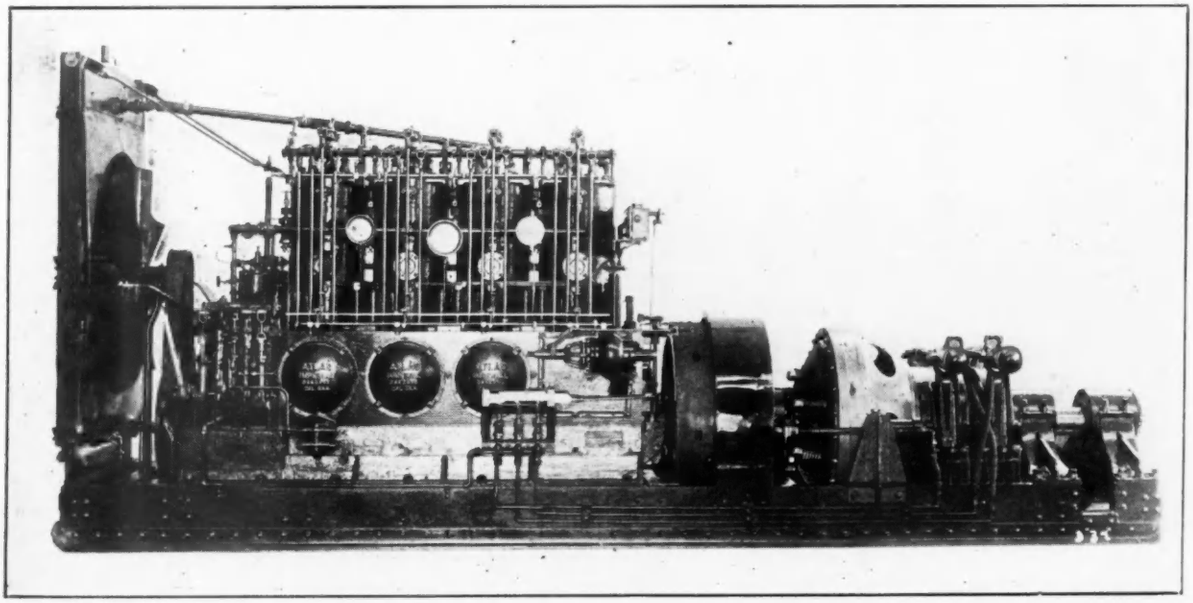
The Diesel engine appeared to offer an early solution of the problem, in so far as a prime mover was concerned. However, due to the high torque at low speeds (lugging power), characteristic of Diesel engines, a satisfactory transmission between the engine and drilling equipment presented a difficult problem. It was evident that any mechanical clutch and transmission assembly adequate to meet the requirements would have to be very heavy, cumbersome and expensive.

The first and most notable attempt to solve this problem by an actual field test was made by Shell Oil Company, co-operating with Atlas Imperial Diesel Engine Company, about three years ago. A four-cylinder 150 horsepower, heavy duty Atlas Imperial Diesel engine was used as the drilling engine. This engine was equipped with mechanical air actuated clutch and reverse gear. A three-cylinder 110 horsepower Atlas Imperial heavy duty engine was employed to drive the mud pumps, and also to function as a stand-by in the event of a breakdown of either the drilling engine or draw works. To meet both requirements, this engine was equipped with a clutch and reverse gear similar to that on the drilling engine, which was chain connected to the band wheel of the rig. On the opposite end of the engine was installed a clutch and sprocket for driving the mud pumps. Thus this engine was equipped with a power take-off on either end.

After drilling a comparatively shallow well in the Torrance field as an initial test of this equipment, Shell Oil Company moved the entire outfit to its Puente lease, near Brea, where a 5825-foot well was successfully drilled.

These tests proved the practicability of using Diesel power for deep drilling operations. However, these early engines with their accompanying clutches and reverse gears constituted exceedingly heavy and cumbersome units. As an example of the transportation problem they presented, the larger engine weighed 14 tons and the smaller unit nearly as much.

Since the early test described above, the Atlas Imperial Diesel Engine Company has developed a new type of Diesel engine, known as the Industrial type. This engine is a full Diesel of the solid or airless injection type, retaining all of the desirable characteristics of the heavier type engine, with less than half the weight. As an example, a 200-horsepower Industrial type engine weighs ap-



Heavy duty Atlas Imperial Diesel Drilling Engine used successfully in pioneering the use of Diesel power for deep well drilling

proximately six tons, as compared with 14 tons for the 150-horsepower engine described in the first part of this article.

In addition to the great reduction in weight accomplished in this improved type of engine, it was equipped with dust and slush proof covers, entirely enclosing the valve mechanism.

This marked improvement in the Diesel engine itself gave immediate promise of greater portability and created renewed interest on the part of the oil operator, resulting in the present development, to a description of which this article is principally devoted.

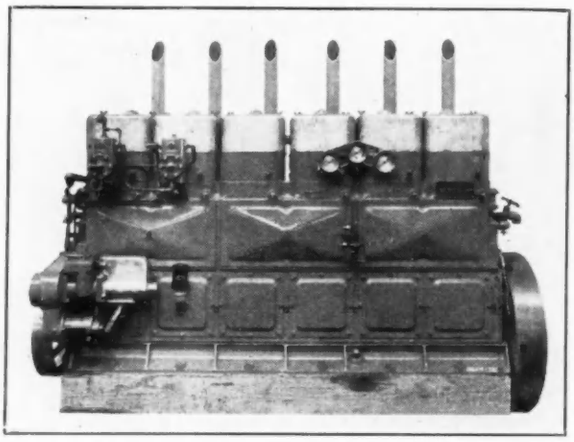
The latest attempt to adopt Diesel power for deep well drilling practice has met with unqualified success. It consists of adapting the direct current, variable voltage control (Ward Leonard) system to driving the draw works and pumps of a regular rotary drilling rig.

For many years alternating current supplied from power lines has been extensively utilized for drilling in nearly all California fields with more or less success. The principal objections to the use of this current are lack of flexibility, expense and the fact that it is not always available, especially on wild-cat locations. Therefore, while A. C. electric driven drilling rigs have been successfully used for many years, they have not entirely answered the operators continued quest for an economical, self-contained source of power, that would at the same time provide the reliability and flexibility desired.

Much credit for a completely successful solution of this problem is due the engineering department of Standard Oil Company of California, co-operating with Atlas Imperial Diesel Engine Company, and Westinghouse Electric & Manufacturing Company.

In May, 1930, the first Diesel-electric rotary drilling rig ever used was placed in operation on the Standard Oil Company of California's Vickers lease in the Baldwin Hills field, near Los Angeles. Not only was this the first Diesel-electric drilling rig ever used, but it was also the first time direct current was ever used for drilling, previous drilling motors all being of the alternate current type.

In order to view this installation from the oil operator's standpoint, it is necessary to regard the electrical equipment hereinafter described, as furnishing the most successful means so far developed, of transmitting the economical and dependable power of the Diesel engine to the modern rotary drilling rig—in other words, a reliable and extremely flexible transmission.

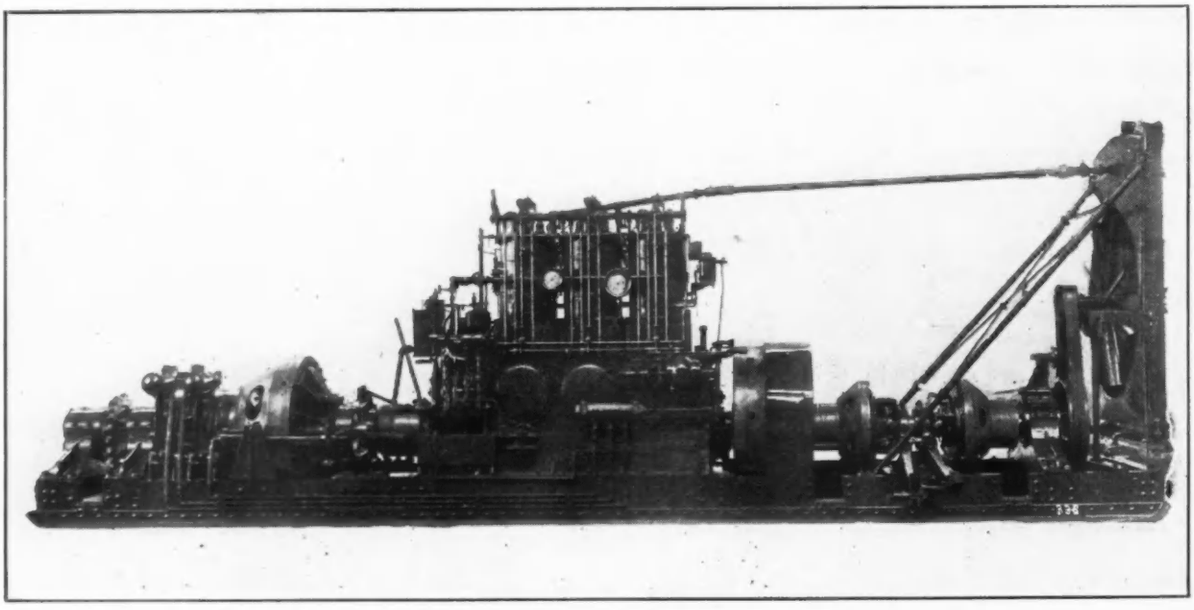


200 h.p. six-cylinder Industrial Type Atlas Imperial Diesel drilling engine

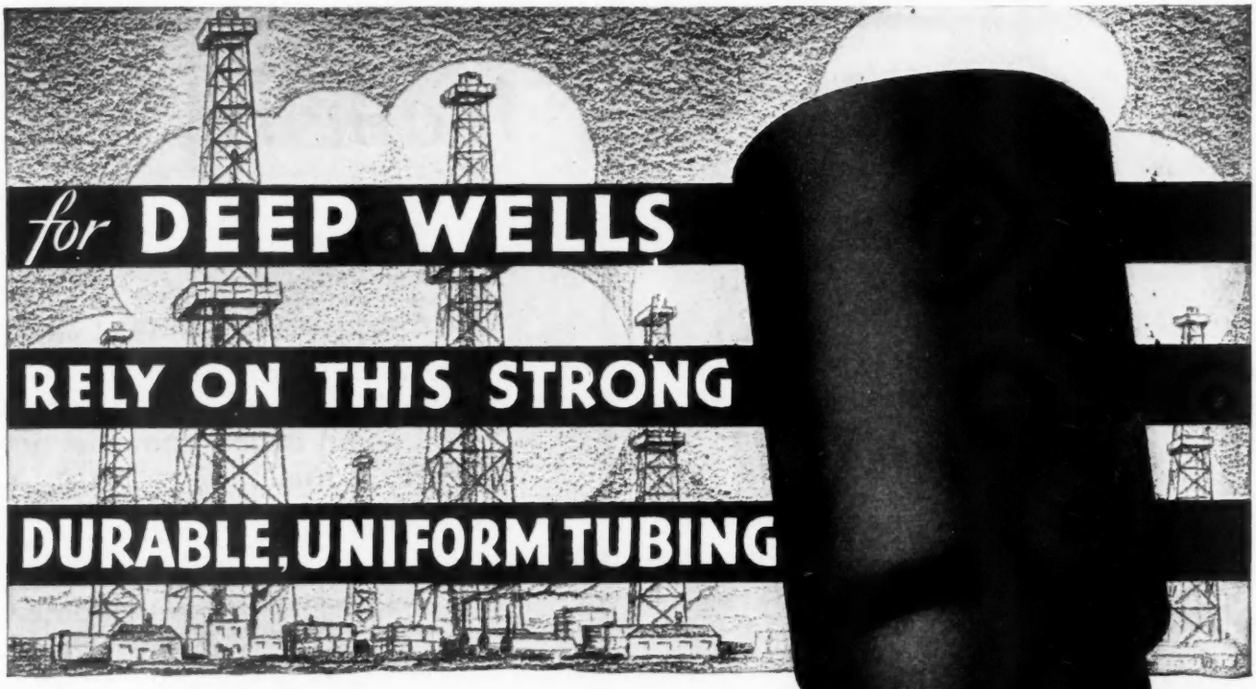
The system employed for control is the variable voltage system, known also as the Ward Leonard system, and in Germany as the Ilgner system. It has been widely applied for many years in other lines of industry, such as steel rolling mills, large hoists, elevators, and boats; but this is its first application to oil field machinery.

Various methods of using direct current could be employed, but it was believed that this installation was of especial merit. So far the results attained seem to bear out this belief. For use in wild-catting its primary virtue is that, except for the trifling amount used in the radiators of the engines, it requires no water. Of course, water is needed for circulation in the hole, but as that can be of very inferior quality, provision for it can be made much more easily than good water for steam boilers can be located. Little fuel is required for the Diesel engines, the two used in this test burning from six to eight barrels daily.

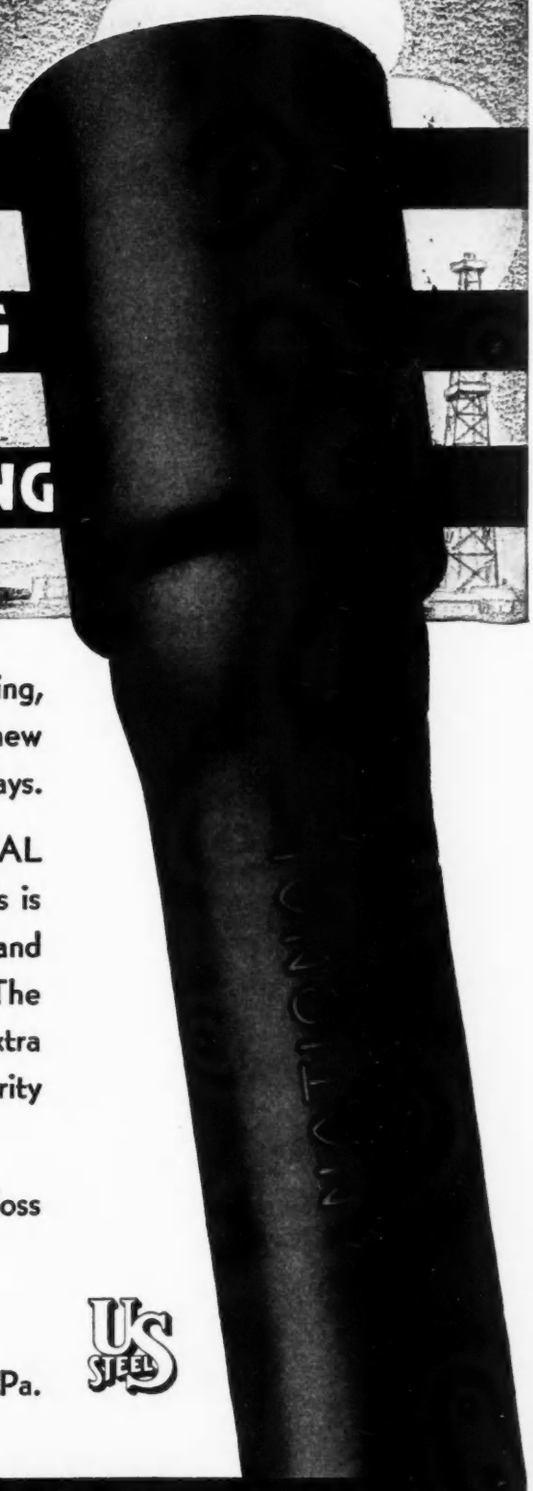
The system, in brief, includes prime movers driving two



Heavy duty Atlas Imperial Diesel mud pump engine used successfully in an early attempt to adapt Diesel power to rotary drilling



for DEEP WELLS
RELY ON THIS STRONG
DURABLE, UNIFORM TUBING



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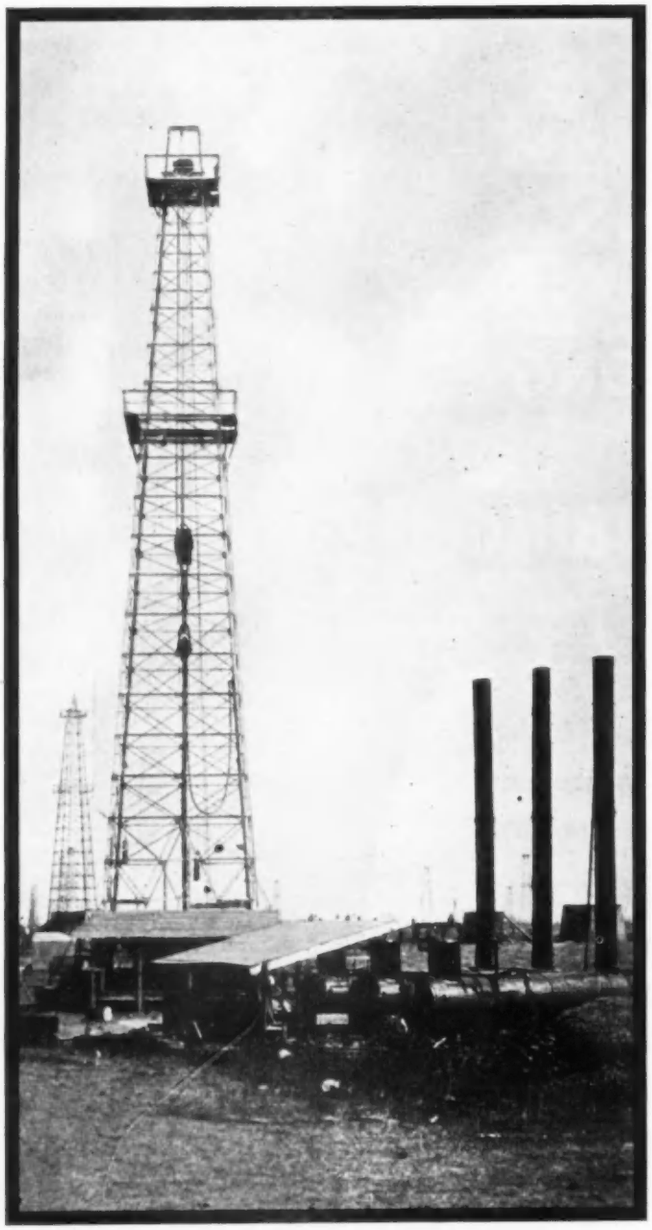


An I. T. I. O. Drilling Rig at Oklahoma City. Others in the background also drilled with IDEAL-AJAX.

Again . . . . .

WITH the advent of superheated boilers, the IDEAL-AJAX Roller Bearing Engines were again called upon for new speed records.

IDEAL-AJAX pioneered the piston valve engine fortunately in advance of this development. The result today is new IDEAL-AJAX equipment refined in all details as the best insurance of dependable drilling, especially for deep wells.

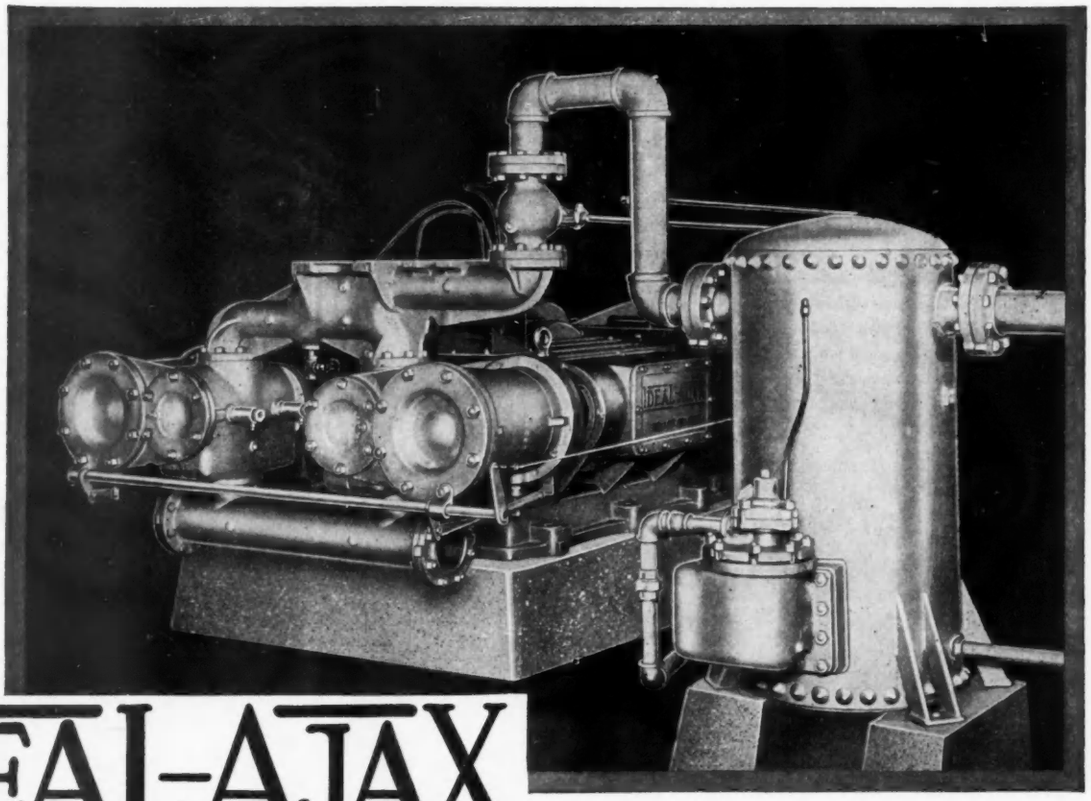
Records were also made at Hobbs, New Mexico, and in the Texas Field.

Ask the National Supply Man for Details

New IDEAL-AJAX Records in the Oklahoma City Field

IT'S little wonder that Ajax Engines are being specified and used by the leading Oil Companies and Drilling Contractors because they have proved in actual service that they can produce consistently, continuously.

If you are not thoroughly acquainted with all the advantages of these engines, it will pay you to get complete information from any National Supply Co. office.

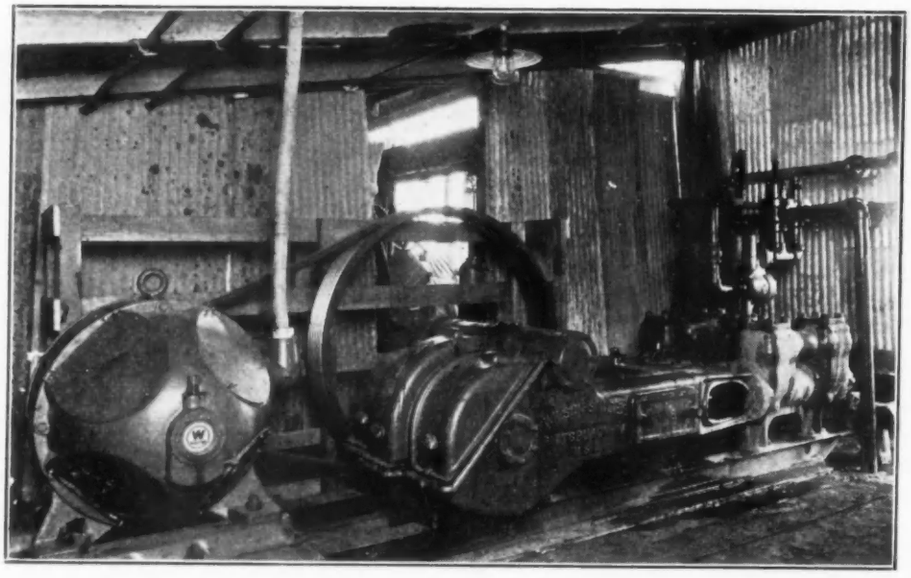


IDEAL-AJAX

ROLLER BEARING

Made by **AJAX IRON WORKS, Corry, Pa.**

Equipment above shows 12x12 Totally Enclosed Roller Bearing Steam Drilling Engine with Steam Separator Receiver and Automatic Steam Trap.



125 h.p. DC Motor driving 6 x 16-inch pump, showing slide base integral skid mounting of pump and motor

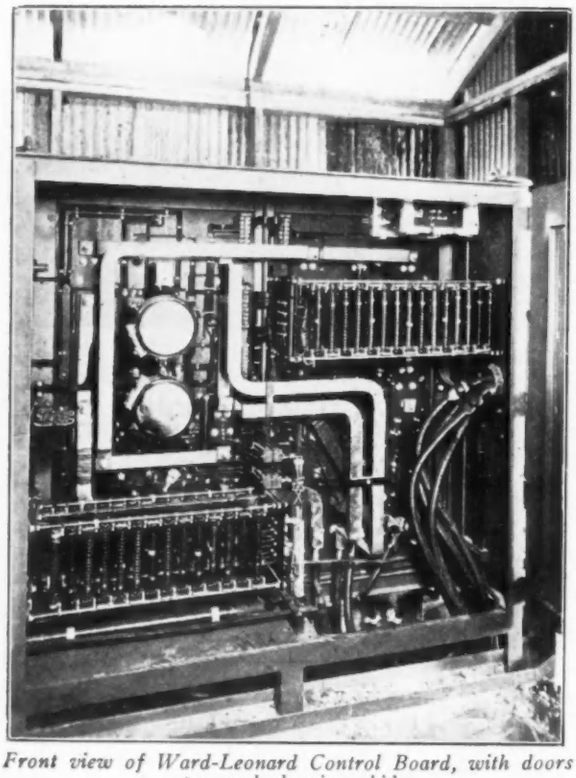
generators, each developing direct electric current up to 250 volts, which is supplied to a drilling motor and a mud pump motor on the rig. This current passes through a variable voltage control panel and is regulated entirely by a master control on the derrick floor which actuates the resistance tubes and contracts in the control panel.

As installed for Standard Oil Company of California at Inglewood, the outfit consists of two identical power-generating units. Two units are used partly for protection against a breakdown of the power supply, as drilling can be carried on with only one generator working. These units are each made up of a 200 horsepower, six-cylinder, 450 rpm Atlas Imperial Diesel engine, propelling a 125-kilowatt, 250-volt, 1200 rpm generator, and a 15-kilowatt, 125-volt exciter, supplying the field currents for the generators and motors. The exciter is made larger than it needs to be to fulfill this primary function, and the extra capacity is utilized to provide current for lights and auxiliary power. Blowers, which force air through the enclosed, vapor-proof motors on the rig to keep them cool, are driven by this auxiliary power, as are other small motors if needed.

While drilling ahead, these generators are operated independently, one supplying power to the motor driving the mud pumps and the other supplying power to the motor actuating the draw works and the rotary table. When pulling pipe or hoisting, the generators are hooked in series.

The mud pump is driven by a 125 horsepower, 250-volt, 900 r.p.m. motor. The drilling motor has a dual rating of 125 horsepower, 250 volts, and 450 rpm when drawing current from only one generator, and 250 horsepower, 500-volt, 900 rpm when both generators are hooked in series. Thus for purposes of pulling pipe when extra power is necessary, the power of the drilling motor is just doubled by cutting out the mud pump motor and directing the current from the two generators to the drilling motor.

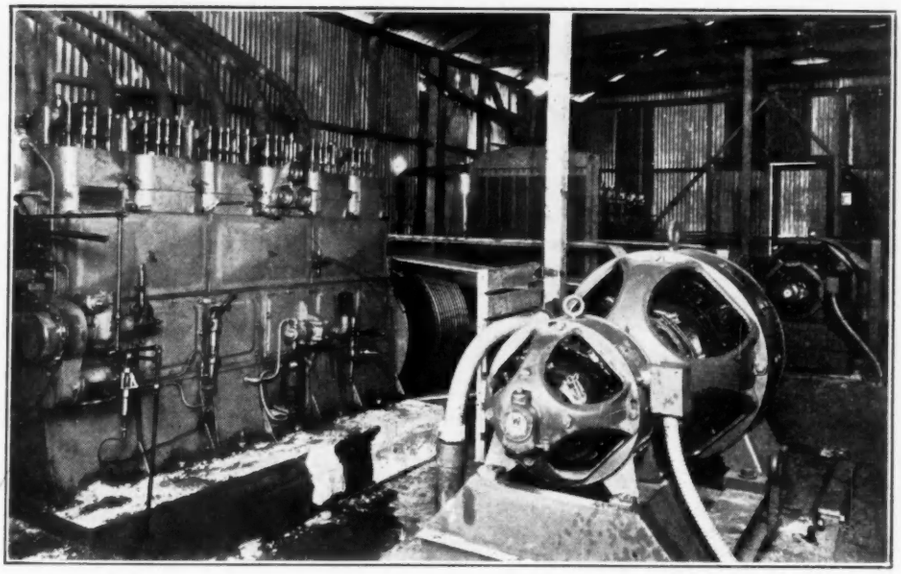
These motors are compound wound to give them a



Front view of Ward-Leonard Control Board, with doors open and showing skids

Rear view of Ward-Leonard Control Board, showing contacts and operating switches

drooping speed characteristic with an increase of the load; that is, under load they slow down, although continuing to apply the maximum amount of power to the draw works. Since the amount of current flowing through the motor determines the amount of torque, while the voltage applied to the motor determines the speed with which it runs, it is obvious that with this type of motor maximum torque can be obtained at any speed, and also that the motors are more efficient and less liable to disastrous wear and tear, because they can be operated at half speed on half voltage while the bit is actually making hole. This is one of the important features of these new direct current motors.

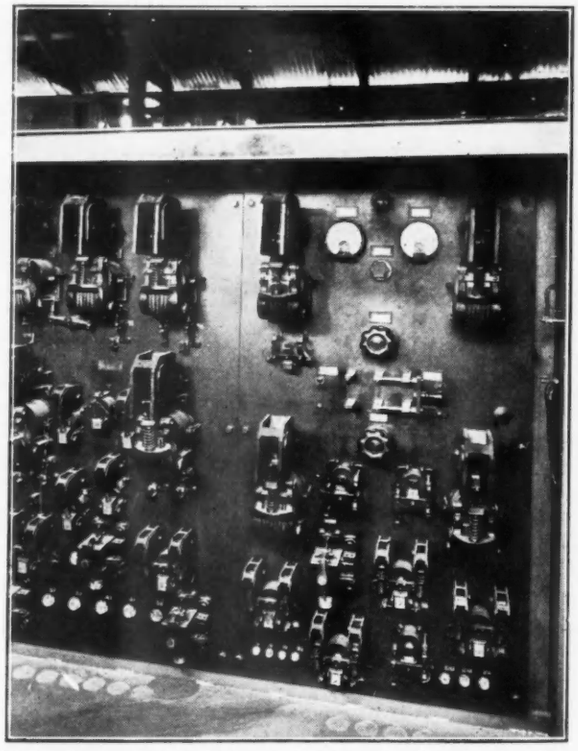


Two 200 h.p. Atlas Imperial Diesel engines driving two 125 kw generators and exciters

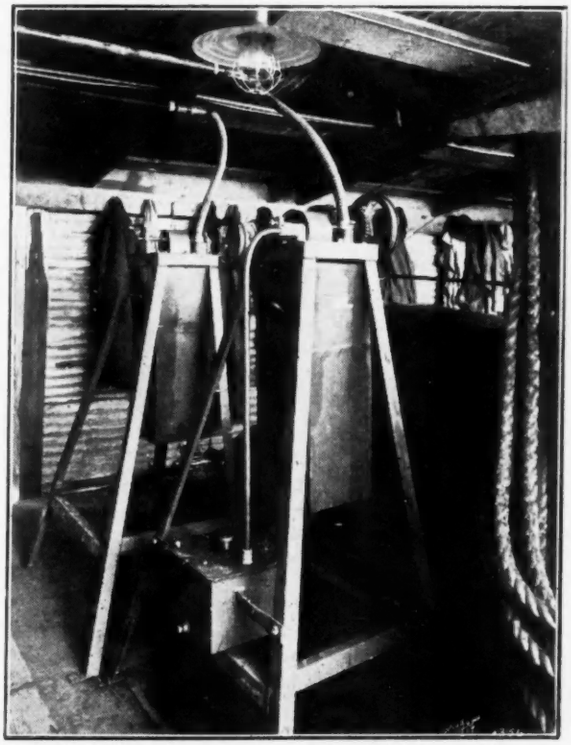
To provide the greatest safeguards against the possibility of fire, the power plant and the control switches in the variable voltage control panel are located in a power house about 300 feet from the rig. As a matter of fact they could be located almost any distance away. Twenty-six small wires carry the current to and from the motors and the master control on the rig through the rather intricate control panel in the power house.

The generators, switches and engines in the power house are not vapor-proof. On the rig, however, both motors are entirely enclosed and vapor-proof, as are many electric drilling motors, to eliminate the possibility of electric sparks igniting any gas which may be encountered in the well. The master control, operated by a hand wheel on the draw works post and giving the driller instantaneous control over the speed of the drilling motor, is enclosed in a bath of oil.

The two controllers comprising the master control unit are operated in tandem by the hand wheel on the draw works post when the two generators are in series and independently when both the mud pump motor and the drilling motor are running. In the latter case the mud pump controller is set at a fixed speed. These controllers operate on a very low amperage since their only function is to vary the strength of the magnetic field in the generators,



End view of Ward-Leonard Control Board, showing switches and recording and indicating meters



Controls located immediately behind driller's position, for control of pump and draw works

250 h.p. DC Drilling Motor, driving draw works through direct connected Emsco reduction gear

Arrangement of draw works and table. Note indicating ammeter and voltmeter for driller's guidance

thus varying the voltage of the current sent from the generators to the drilling motor and thereby governing the speed of that motor. This low amperage is an additional safety factor in preventing fire.

The variable voltage control panel in the power house consists of resistance tubes or field resistances for voltage control, main contactors for the series fields of the drilling motor (making the motor reversible), exciter rheostats, meters for the exciters, a recording graphic watt meter (making a permanent record of the amount of power being used), a voltmeter and an ammeter, switches for auxiliary circuits, and the auxiliary contactors, bus bars, and necessary connections. The entire panel is enclosed in a steel cabinet mounted on skids so that it can be moved easily.

This system apparently has many advantages. One particular feature, in so far as electrical efficiency is concerned, is that there are no series grid resistances to absorb power. Only the exact amount of voltage required for the speed desired is developed by the generators, since the speed of the motor is in direct relation to the voltage supplied it.

Furthermore, the compound winding of the motor, which provides the drooping speed characteristics under increasing load, also gives a cushioning effect, greatly lessening the liklihood of breaking chains. In other words, because of the fact that this type of motor provides maximum torque per ampere, there is a steady and constant flow of power, whatever the speed at which the motor is being run.

On the end shaft of the drilling motor is an electrically operated and automatic brake which takes hold with the cutting off of the current, assisting materially in eliminating excess wear on the motor by bringing it to an immediate stop.

Instantaneous reversal of the direction of the motor is possible merely by reversing the field in the generators. With the two generators in series, a very high power and speed of the drilling motor is obtained which, with the constant torque, makes pulling pipe a fast operation.

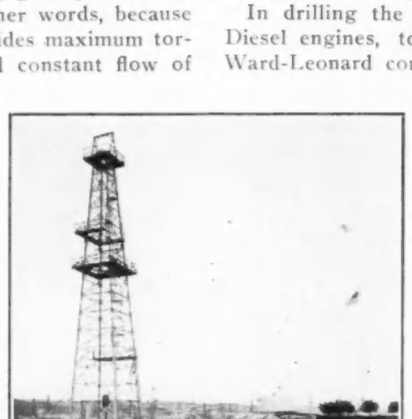
One of the tests of any new drilling equipment is, naturally, the difficulty encountered by the driller in adapting himself to it. With electrical equipment the necessity of training men especially to operate it has been one drawback to its widespread adoption. Certain companies have made a point of educating numbers of men in their crews to handle electrical drilling apparatus, so that they have become expert at it, but those who have not had the advantage of such training have a little difficulty in becoming used to the operation of electrical equipment.

Without any previous instruction, the drilling crews on the Vickers 1-24 began making hole as soon as the outfit was in place, and have experienced no trouble with it. As in all electrical installations, of course, a trained electrician must be within call in case anything should go wrong with the system.

Shutdowns, whatever the power used in drilling have to be guarded against. While the record of electrically operated rigs in all sections of California, in which commercial current has been used, is very clean, this outfit apparently provides additional insurance against shutdowns which might prove disastrous.

Standard Oil Company of California has completely drilled two wells with this equipment, and the third well is rapidly nearing completion.

In drilling the first two locations, the Atlas Imperial Diesel engines, together with their generators and the Ward-Leonard control panel, were installed in a separate engine house located approximately 200 yards from each drilling site, the power cables and control wires being carried to the DC drilling motors and master controllers in the rig on a series of wooden horses. Thus it was only necessary to move the motors with the rig to the second location. In fact using this system, it is possible to drill several wells from a centrally located installation of the engines and generators, the limiting factor being the additional cost of long lines of cable and control wires, which would make it more economical to move the engines and generators, rather than invest in long lines of copper to reach remote locations.



Plan view of Standard Oil Company's Vickers 1, Baldwin Hills field. Generators located to serve several wells without moving

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Oilfield scene at Signal Hill, California. Visible in the background are the derricks of the many wells drilled in the field. Inset: Close-up of a derrick showing the drilling platform and the pulley system used to raise and lower the drill pipe.

TRANSIT'S Are You Getting Ready?

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Milwaukee, Wisconsin

THE FALK COMPANY, Steel Castings, Designer
Milwaukee, Wisconsin

GENERAL MOTORS, INC., Truck Division, Designer
Pontiac, Michigan

STATE FORESTRY DEPARTMENT, Fire Protection Engineer
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ABRESCH-CRAMER AND TAYLOR COMPANY, Engineers
Milwaukee, Wisconsin

Regardless of present conditions, this country will sooner or later enjoy the greatest business expansion ever [illegible] production race starts, [illegible] Then the oil companies, whose fields are equipped with the most thoroughly modernized machinery, will be the ones to profit [illegible]

With this thought in mind, foresighted oil operators are checking over every piece of field equipment now—asking themselves many questions about it.

Is this drilling rig obsolescent to the point where it should be replaced with modern equipment of greater capacity?

Has that pumping equipment depreciated to a degree that is likely to cause delays resulting in the disruption of the entire production schedule?

Is this [illegible] costing too much for power, lubricant and maintenance?

When the answer is "yes", it will pay you well to do some writing off and to make immediate replacements.

In making such replacements, remember that Timken Tapered Roller Bearings are revolutionizing operating and production costs in all types of oil field machinery.

And remember that these savings are so great that it is not uncommon for Timken-equipped machinery to pay for itself in a few months.

Now is the time to put these substantial economies into effect.

When business shifts into high, will you be ready to hold the pace?

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

WORLD PETROLEUM IN REVIEW

Thuringian Well Increases Flow

Berlin, Germany.—A well on the property of a potash concern at Muehlhausen in Thuringia, which was recently brought in flowing at the rate of 400 barrels daily, has increased its flow to such an extent that it has justified the signing of an operating contract by the community of Muehlhausen and the Raky Company.

This new interest in oil prospecting and drilling has brought about negotiations between the states and petroleum interests that have been seeking concessions in Thuringia.

This exploration extends the exploitation activities started in the Hanover territory last year. Sufficient encouragement has been given the activities that two American companies have entered the field. Crude production was increased from an estimated 721,000 barrels in 1929 to 1,190,000 barrels in 1930.

Government Approves Oil Tax Bill

Praha, Czechoslovakia.—Insufficient funds for carrying out the present road building program as outlined for this country has caused the government to approve a bill, recently introduced in parliament, to provide a tax on mineral oils. The bill provides for a tax of $.0681 on mineral oils with a density of 47.6 degrees and $.0136 for oils with a density ranging from 29.3 to 47.6 degrees. Gasoline used for stationary motors for agricultural or industrial purposes is granted a reduction in the tax by the authority of the Minister of Finance.

The present tax for the road fund is derived from a tax on motor vehicles, a tax on bus tickets and from certain import duties. Estimates of the revenue to be obtained from the proposed tax will amount to $4,200,000 a year, of which 60 per cent will go to the road fund. The bill also makes a change in the present law regulating expenditures from the road fund, and provides that current revenues may be used for building new roads as well as improving existing roads.

National Motor Fuel Proposal Submitted

Buenos Aires, Argentina.—The movement to utilize national sources of alcohol as motor fuel substitute has received impetus in a report submitted by the Argentine national chemical office certifying the feasibility of introducing a national fuel composed of 90 per cent gasoline and 10 per cent pure alcohol.

Alcohol will be obtained from linseed and corn oils which are very easily distilled for this purpose. Technical groups have expressed approval of this mixture even if the alcohol content is as high as 30 per cent. It is estimated that in six months time a distillery could be installed capable of turning out approximately 31,000 barrels annually.

Lakes Entrance Crude Marketed

Sydney, Australia.—Reports have been received here that arrangements have been made for marketing the entire output of South Australian Oil Wells Company which is operating in Victoria. The company is producing oil from five of the six wells drilled in that area.

The first Australian crude to be marketed in the Commonwealth was marked by a shipment of 100 barrels with other shipments to follow immediately from the storage at Lakes Entrance. The oil is being sold for refining purposes and will be treated at Newport, Victoria, for conversion into lubricating oils and distillate.

Drilling Continues Despite Results

Santiago, Chile.—Poor showings in the Magallanes area have failed to dampen the hopes of government operators of finding production in that vicinity and drilling activities will be resumed in further attempts to locate sources of petroleum.

One of the wells being drilled at Tres Puentes showed gas with traces of oil at about 3300 feet but failed to show any further signs of possible production after having been drilled about 600 feet further. Another well has been located farther inland and will be drilled in the near future. The well at Tres Brazos is already down to 3500 feet without any show of gas or oil. It is expected that this test will be drilled to 4500 feet before the work will be discontinued.

Construction Started On Stanlow Docks

London, England. — Construction of the oil docks at Stanlow which will take approximately 2½ years to complete has been announced by Manchester Canal Company. The new dock will have two berths for large tankers and will eventually provide sufficient space to enable the handling of three times the existing volume of petroleum products that are being handled.

Tunisian Petroleum Research Planned

Paris, France.—Attempts to substantiate the belief of geologists that petroleum exists in Tunisia, will be made by the French government if arrangements can be made with the local government to properly exploit possible petroleum deposits. Results heretofore in that country have proved discouraging, particularly the operations in Chelif valley which were worked during the war. These tests failed to produce commercially. The expected exploration work will be undertaken in the Kef-Bou-Debbous deposit which shows salt water and petroleum.

Foreign Prospecting Companies Admitted

Georgetown, British Guiana.—Official information made public by the Department of Commerce states that the removal of the embargo on prospecting for oil in this country by foreign countries is contemplated. The authorities will require the foreign interests to obtain the express approval of the British Guiana Secretary of State before granting definite permission to prospect.

Precautions will be taken to prevent speculative prospecting and the interests will be required to have sufficient financial resources to properly conduct prospecting activities before the applications will be approved.

Venezuelan Petroleum Increases Activities

Maracaibo, Venezuela.—Venezuelan Petroleum Company and Venezuelan Atlantic Refining Company plan to develop acreage adjoining holdings in the Monagas concessions during the year. A report of the company shows that income from royalties of the 95 wells drilled by Venezuela Gulf Oil Company failed to show an increase. During the past year 41 wells were shut in and only 20 wells were allowed to produce over 1000 barrels each daily.

A well recently completed extended the producing area five miles southeast of the present producing territory.

Are You Getting Ready?

Good times are coming in the oil industry

Regardless of present conditions, this country will sooner or later enjoy the greatest business expansion ever known.

When the great production race starts, it will be oil operator against oil operator as never before. Then the oil companies whose fields are equipped with the most thoroughly modernized machinery will be the ones to profit most fully.

With this thought in mind, foresighted oil operators are checking over every piece of field equipment now—asking themselves many questions about it.

Is this drilling rig obsolescent to the point where it should be replaced with modern equipment of greater capacity?

Has that pumping equipment depreciated to a degree that is likely to cause delays resulting in the disruption of the entire production schedule?

Is this hoist costing too much for power, lubricant and maintenance?

When the answer is "yes", it will pay you well to do some writing off and to make immediate replacements.

In making such replacements, remember that Timken Tapered Roller Bearings are revolutionizing operating and production costs in all types of oil field machinery.

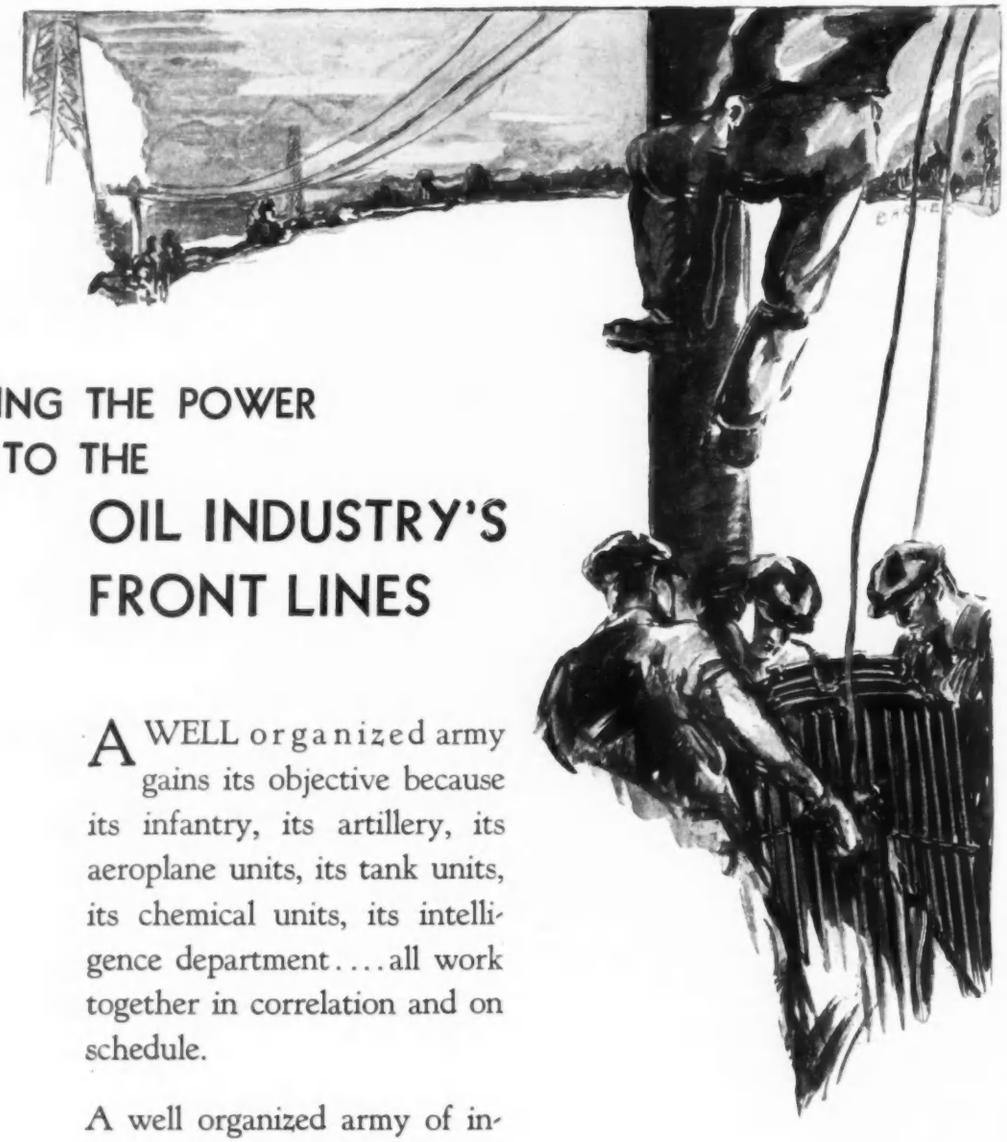
And remember that these savings are so great that it is not uncommon for Timken-equipped machinery to pay for itself in a few months.

Now is the time to put these substantial economies into effect.

When business shifts into high, will you be ready to hold the pace?

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* BEARINGS



BRINGING THE POWER LINES TO THE OIL INDUSTRY'S FRONT LINES

A WELL organized army gains its objective because its infantry, its artillery, its aeroplane units, its tank units, its chemical units, its intelligence department....all work together in correlation and on schedule.

A well organized army of industry likewise gains its objective when every factor works with every other factor, no one part holding back another.

It is the aim of the Gulf States Utilities Company to correlate its own army of workers with those of the oil industry so that power and light will be brought to pipe lines, to refineries, and to new oil fields at the proper time.

GULF STATES
UTILITIES COMPANY

General Offices

BEAUMONT, TEXAS LAKE CHARLES, LA.

Markets • Production • Crude Prices

H. J. STRUTH, ***Staff Economist, Houston, Texas***

East Texas Largely Responsible For Increase of 56,150 Barrels

East Texas hit its stride last week with an increase in daily average production of 50,300 barrels. As a result, United States daily average output moved sharply upward to 2,308,250 barrels, a net increase of 56,150 barrels. It will probably be recalled by readers of THE OIL WEEKLY that the prescribed limit for daily crude production for this year was placed at 2,328,000 barrels. Accordingly, the accompanying production chart was marked with a "dead line" and it was stated in this section that production could be maintained at that level throughout the year without impairing the economic situation. In fact, maintaining production at that level would insure a reduction in crude stocks of about 35,000,000 barrels this year. The result of last week's sharp gain in production brought the curve decidedly nearer the "dead line," although the upward trend thus far is ascribed almost entirely to the new East Texas area. Thus, while increased production may be justified, the fact remains that producers outside East Texas have shared but little in the improved market outlet for oil.

Following is a summary of indicated normal production limits for the leading producing states for this year, as previously outlined, in comparison with actual production for last week.

State—	Prescribed economic limit 1931	Actual production week ending April 11, 1931
Arkansas	56,000	47,150
California	549,000	528,900
Kansas	112,000	109,500
Louisiana	76,000	65,750
Oklahoma	519,000	513,700
Texas	775,000	838,050
Balance of U. S.	241,000	205,200
Total	2,328,000	2,308,250

Compared with prescribed and indicated allowable figures, however, last week's production showed an excess of 170,250 barrels for the United States. Of that quantity, Texas is charged with an excess of 146,050 barrels. The difference between the allowable figures and the indicated economic limit would make it appear that many purchasing companies have set their nominations at a low figure to insure a sizeable reduction in excessive stocks. On the other hand, it is seen that low nominations in many other producing districts have been more than offset by increased takings of oil from East Texas. Obviously, price has been the influencing factor in this connection.

Further Increase Justified

Despite the fact that daily average crude production has almost attained the rate prescribed as normal for this year, it is apparent that even further increased production is now justified. A study of supply and demand facts for the first three months of this year indicates that a daily average of 2,446,000 barrels could be maintained from now until September 30 and still insure a reduction in crude stocks this year of 35,000,000 barrels. Thus, there is room for increased production to the extent of about 138,000 barrels daily even now.

The announcement that East Texas will be prorated by the railroad commission, despite the granting of an injunction, proved of no little consequence this week. It brings a ray of hope for those who have been placed at the mercy of increasing production of cheap oil. The injunction has been construed authoritatively to apply only to a tract of 72 acres of producing property in East Texas and places the railroad commission within its rights to enforce proration outside the stipulated section to which the injunction is applicable.

Last week, East Texas production amounted to 195,000 barrels, embracing the producing districts of Joiner, Kilgore and Longview. The original proration figure of 90,000 barrels for East Texas may be increased under a new order now pending, but it is expected to have the effect of shutting in at least a part of the total now being produced. The news that two large wells in the Kilgore district showed a percentage of salt water also stimulated considerable thought throughout the industry. This development shows what may happen in East Texas if production continues to flow without restraint. These two developments cannot be construed otherwise than favorable at this time.

California to Cut Allowable

California proration committees contemplate an immediate change in allowable output, probably to a lower figure of 450,000 barrels. If the lower figure is adopted, and realized, the difference between allowable production and actual requirements would be about 100,000 barrels daily. On that basis, it would not take very long to show a sizeable decline in crude storage. Oklahoma reported only a slight change in production last week; a gain of 2150 barrels. Oklahoma City's output, however, showed a gain over the preceding week of about 36,000 barrels, due to taking of potentials. This increase was offset by a corresponding decline in the Greater Seminole area, where taking of potentials has been completed and production is back to former allowables.

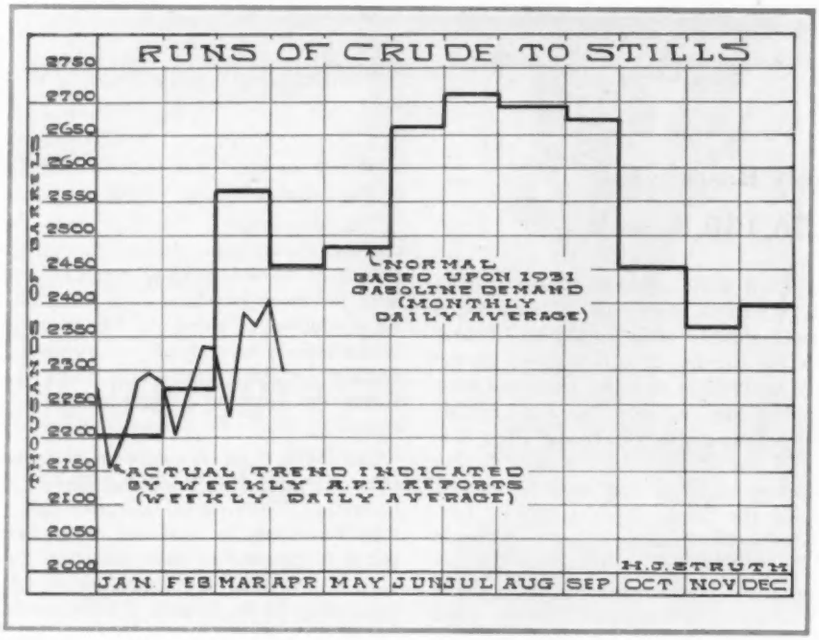
Outside Influences Continue To Hurt Market in California

Such factors as excess stocks, low price crude and gasoline and flush production in certain Mid-Continent districts continue to affect California. A gradual drying up of demands from a limited district which depended largely on California products has not been a severe blow to exports, but has been enough to weaken the gasoline market.

Various agencies are to meet together next week in an effort to arrive at the root of the trouble. Present production, stocks and the probable future needs will be discussed and a new allowable recommended for the state. The producing, refining and marketing divisions will be analyzed and a new set-up proposed. The allowable probably will not be changed much, but there is a rumor that it may be reduced to 450,000 barrels or less.

Both the independents and majors agree that production

MARKET SECTION



should be held to 500,000 barrels or less. The market has become so sensitive that it refuses to take even the present output at a price which will return a profit to the producer.

Several bills have been introduced in the state legislature, but some would do more harm than good. Many of the companies want the state to keep out of the muddle entirely, but others think the petroleum industry should be under a form of state supervision. Overproduction has been responsible for most of the present trouble, and it is doubtful whether a law or two would help materially.

The new producers' agency should amount to something. It is composed of independent operators and its chief purpose is to find a market for crude oil. No prices will be set, but market demands will be studied and the results passed on to members. The organization wants to reduce production to 500,000 barrels or less.

No further change has been made in crude prices. A slight production increase has been noted in the heavy oil fields. This was caused by a natural desire to market as much of this product as possible. Heavy oil brings nearly twice as much as light oil under present schedules.

The gasoline market is no stronger, the retail prices ranging from nine cents to 15 cents in various California districts.

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week ending April 4, 1931

(Figures in barrels of 42 gallons)

District—	Potential Capacity (Daily) Total	Reporting	Per Cent	Crude Runs to Stills Total	Daily Average	Per Cent Operated	Gasoline Stocks see note below	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,295,000	470,700	76.8	8,931,000	7,692,000
Appalachian	141,300	132,500	93.8	683,000	97,600	73.7	1,842,000	1,162,000
Indiana, Illinois, Kentucky	390,800	381,000	97.5	1,932,000	276,000	72.4	5,878,000	3,108,000
Oklahoma, Kansas, Missouri	461,100	412,200	89.4	1,629,000	232,700	56.5	3,484,000	3,709,000
Texas	809,000	743,500	91.9	3,442,000	491,700	66.1	7,871,000	8,339,000
Louisiana-Arkansas	266,600	262,000	98.3	992,000	141,700	54.1	2,081,000	2,334,000
Rocky Mountain	150,100	139,700	93.1	316,000	45,200	32.4	1,900,000	830,000
California	898,500	887,600	98.8	3,334,000	476,300	53.7	[b]*14,089,000	[c]99,259,000
Total week April 4	3,730,100	3,571,200	95.7	15,623,000	2,231,900	62.5	[b]46,076,000	[c]126,433,000
Total week March 28	3,730,100	3,571,200	95.7	16,327,000	2,332,400	65.3	47,444,000	127,268,000
Total April 5, 1930	3,675,900	3,512,400	95.6	17,425,000	2,489,300	70.9	[a]54,067,000	[a]136,229,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included Above in the total of their respective districts.								
Texas Gulf Coast	529,500	529,500	100.0	2,640,000	377,100	71.2	6,759,000	6,051,000
Louisiana Gulf Coast	147,500	147,500	100.0	665,000	95,000	64.4	1,921,000	1,346,000

NOTE: In all the refining districts indicated except California, figures in this column represent gasoline stocks at refineries. In *California they represent the total inventory of finished gasoline and engine distillate held by reporting companies wherever located within continental United States—(stocks at refineries, water terminals and all sales distributing stations, including products in transit thereto). (a) Revised due to change in California. (b) Not comparable with previous weeks nor a year ago due to deduction in California figures of natural gasoline stocks at refineries and gasoline outside of continental U. S. which have been included in previous figures. (c) Also not comparable with previous weeks nor a year ago due to deduction in California of amounts outside of continental U. S. which had previously been reported.

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

State—	Indicated Demand Second Quarter 1931	Economic Limit Second Quarter 1931	Daily Average Last Week	Daily Excess Last Week	Daily Average Since January 1	Daily Excess Since January 1
Arkansas	58,600	56,000	47,150	—8,850	49,144	—6,856
California	591,500	500,000*	528,900	28,900	530,146	30,146
Kansas	118,300	114,000	109,500	—4,500	110,213	—3,787
Louisiana	78,900	71,000	65,750	—5,250	68,554	—2,446
Oklahoma	551,000	465,000*	513,700	48,700	488,918	23,918
Texas	798,700	692,000*	838,050	146,050	710,598	18,598
Balance of U. S.	254,000	240,000	205,200	—34,800	206,822	—33,178
Total	2,451,000	2,138,000	2,308,250	170,250	2,164,395	26,395

*Allowable.

Oklahoma Sales Below Posted Price Weakening Crude Market

Offerings of substantial amounts of Oklahoma crude oil at prices below the posted market have served to weaken the market in the Mid-Continent. These offerings are difficult to place but buyers admit they have had opportunities to take stored oil out of the Seminole area at prices eight cents under the posted schedule.

Since the last reduction in Mid-Continent prices there have been few sales under the posted price, but offerings now current leave no doubt that producers are weakening. Should the amount of below the market oil reach a figure of any importance the whole price structure seems certain to follow.

April 17 has been set as a date for hearing before the corporation commission to determine the market demand for Oklahoma City oil. The umpire of the district has made application and has on file nominations from some buyers who will

Cracked Gasoline Production

Week ending April 4, 1931

(Barrels of 42 gallons)

District	Potential Total	Charging Reporting	Capacity Per Cent	Production Total	Daily Average
East Coast	246,900	222,900	90.3	545,000	77,800
Appalachian	43,400	43,400	94.6	122,000	17,400
Ind., Ill., Ky.	294,200	280,200	95.2	510,000	72,900
Okla., Kans., Mo.	219,900	197,900	90.0	377,000	53,900
Texas	395,500	379,400	95.9	789,000	112,700
Louisiana-Arkansas	901,400	106,900	97.7	247,000	35,300
Rocky Mountain	95,100	95,100	100.0	84,000	12,000
California	182,700	182,700	100.0	290,000	41,400
Total wk. Apr. 4	1,589,600	1,508,500	94.9	2,964,000	423,400
Total wk. Mar. 28	1,589,600	1,508,500	94.9	2,867,000	409,600
Total April 5, 1930		Not Available			

The Texas and Louisiana Gulf Coastal Figures Shown Below are included in the totals of their respective districts.

Texas Gulf Coast	305,000	300,500	98.5	648,000	92,600
Louisiana Gulf C.	77,000	77,000	100.0	184,000	26,300

Imports of Petroleum

(Barrels of 42 gallons)

AT ATLANTIC COAST PORTS—	Total Month March	Total Month February	Week Ended April 4	Week Ended March 28
Baltimore	857,000	877,000	193,000	183,000
Boston	587,000	474,000	220,000	28,000
New York	4,469,000	3,578,000	1,189,000	773,000
Philadelphia	815,000	888,000	205,000	72,000
Others	655,000	752,000	235,000	(a) 211,000
Total	7,383,000	6,569,000	2,042,000	1,267,000
Daily Average	238,161	234,607	291,714	181,000
AT GULF COAST PORTS—				
Galveston District	126,000	127,000	65,000	63,000
New Orleans and Baton Rouge	80,000	324,000	80,000	.....
Port Arthur and Sabine District	.....	.....	.....	.....
Tampa	61,000	15,000	.....	.....
Total	267,000	466,000	145,000	63,000
Daily Average	8,613	16,643	20,714	9,000
AT ALL UNITED STATES PORTS—				
Total	7,650,000	7,035,000	2,187,000	1,330,000
Daily Average	246,774	251,250	312,428	190,000
Distribution of Total Imports Is As Follows:				
Crude	3,942,000	4,339,000	1,224,000	609,000
Gasoline	1,409,000	1,076,000	328,000	242,000
Gas Oil	196,000	20,000	111,000	.....
Fuel Oil	2,103,000	1,600,000	524,000	(a) 479,000
	7,650,000	7,035,000	2,187,000	1,330,000

(a)—Revised.

California Oil Receipts

(Barrels of 42 gallons)

AT ATLANTIC COAST PORTS—	Total Month March	Total Month February	Week Ended April 4	Week Ended March 28
Baltimore	311,000	162,000	.....	155,000
Boston	50,000	76,000	.....	.....
New York	663,000	(a) 897,000	225,000	160,000
Philadelphia	227,000	112,000	189,000	117,000
Others	272,000	161,000	73,000	95,000
Total	1,523,000	1,408,000	487,000	527,000
Daily Average	49,129	50,286	69,571	75,286
AT GULF COAST PORTS—				
Total	197,000	105,000	.....	.....
Daily Average	6,355	3,750	.....	.....
AT ATLANTIC AND AT GULF COAST PORTS—				
Total	1,720,000	1,513,000	487,000	527,000
Daily Average	55,484	54,036	69,571	75,286
Distribution of Total California Oil Receipts Is As Follows:				
Gasoline	1,450,000	1,227,000	487,000	454,000
Kerosene	.....	47,000	.....	.....
Gas Oil	270,000	75,000	.....	73,000
Fuel Oil	.....	153,000	.....	.....
Lubricants	.....	11,000	.....	.....
	1,720,000	1,513,000	487,000	527,000

(a)—Revised.

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
1931											
January	452,000	106,350	511,050	188,850	41,100	50,700	110,300	96,700	535,700	2,092,750	64,874,450
February	473,750	114,450	523,700	185,600	43,950	49,950	109,800	100,100	527,300	2,128,600	59,600,450
March*	553,750	114,300	602,600	183,550	41,600	49,100	112,500	98,350	546,250	2,302,000	69,060,600
April 4	511,550	108,950	632,800	180,450	39,250	47,200	109,500	97,300	525,100	2,252,100	15,764,700
April 11	513,700	109,500	683,750	181,300	38,750	47,150	111,500	93,700	528,900	2,308,250	16,157,750
Increase	2,150	550	50,950	850	.....	.....	2,000	.....	3,800	56,150	393,050
Decrease	.....	.....	.....	.....	500	50	.....	3,600	.....	.....	.....

*Preliminary.

Last Week's Daily Average Production by Districts

TEXAS	April 11	April 4
Panhandle District	50,650	51,400
North Texas	57,150	57,650
West Central Texas	25,050	25,350
East Central Texas	246,700	192,200
West Texas	241,950	245,050
Southwest Texas	62,250	61,150
Texas Gulf Coast	154,300	153,800
Total Texas	838,050	786,600
OKLAHOMA	513,700	511,550
CALIFORNIA	528,900	525,100
KANSAS	109,500	108,950

LOUISIANA	April 11	April 4
North Louisiana	38,750	39,250
Louisiana Gulf Coast	27,000	26,650
Total Louisiana	65,750	65,900
ARKANSAS	47,150	47,200
MOUNTAIN STATES		
Wyoming	42,300	42,650
Montana	8,800	8,700
Colorado	4,250	4,150
New Mexico	38,350	41,800
Total Mountain States	93,700	97,300
EASTERN STATES	111,500	109,500
Total United States	2,308,250	2,252,100

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	3	1	3	1	..	..	..	..	304	4
California	6	7	6	6	..	..	..	1	2,490	2,275
Illinois	..	1	..	1	..	..	..	..	....	25
Indiana	1	1	..	..	..	..	1	1	....	.....
Kansas	6	6	4	1	..	4	2	1	1,245	80
Kentucky	48	7	23	4	7	1	18	2	3,165	167
Louisiana	10	14	..	4	4	1	6	9	....	940
Michigan	..	1	..	..	..	1	..	..	....	.....
Mississippi	2	3	..	..	1	..	1	3	....	.....
New Mexico	..	1	..	1	..	..	..	..	....	5,190
Ohio	17	17	5	5	7	9	5	3	44	103
Oklahoma	26	25	13	15	4	6	9	4	26,360	17,255
Pennsylvania	3	4	1	1	2	3	..	..	1	2
Texas	104	112	68	74	3	4	33	34	396,015	366,612
West Virginia	13	13	2	2	7	10	4	1	4	6
Missouri	1	..	..	..	..	..	1	..	....	.....
Total	240	218	125	115	35	42	80	61	429,628	392,659
Increase This Week	22	..	10	..	..	..	19	..	36,969	.....
Decrease This Week	..	..	..	..	7	..	..	..	....	.....

Comparison of Permits Granted for New Wells

State—	Week Ending April 11	Previous week	This week 1930	Total this month	This month 1930	Total this year	Total this date last year	1930 year total
Arkansas	..	..	..	..	4	16	33	108
California	11	6	14	17	29	116	213	922
Louisiana	..	6	23	6	47	102	310	948
Kansas	3	6	32	9	48	137	276	944
Oklahoma	23	21	90	44	164	345	847	2,830
Texas	146	124	106	270	263	1,430	2,223	7,052
Total	183	163	265	346	555	2,146	3,902	12,804

MARKET SECTION

for the second quarter of the year take more oil than during the first quarter. Shell Petroleum Corporation will raise its takings from the field from 6000 to 12,000 barrels. Empire Oil & Refining Company also is reported to be seeking more oil out of the pool. It is known that Sinclair Oil & Gas Company does not yet have all the oil wanted from the pool. By the date for the hearing potentials for the field should be complete. Work already done indicates that the total potential for the field will not be more than five per cent more than the potential found for the first quarter.

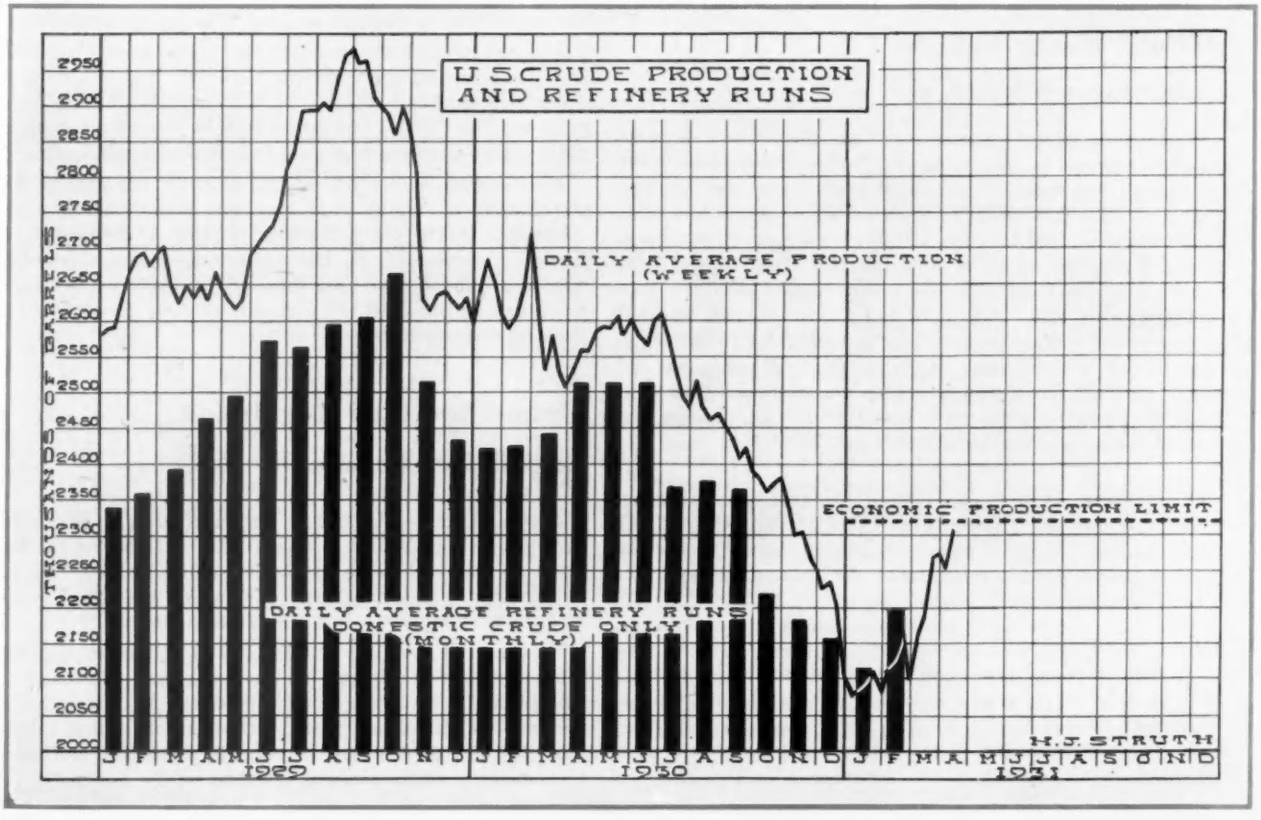
Announcement by the Standard Oil Company (Indiana) of a third gasoline to be sold two cents per gallon under the price of Red Crown gasoline is another move which places further weakness in the crude price structure. This gasoline, to be sold as "Standard Blue," will be sold over the whole Standard Oil Company (Indiana) territory at an average of about nine cents per gallon, plus state tax. Executives of other concerns interpret the move as certain to bring down the price of all gasolines, with a further reduction in crude prices.

Sharp Increase in Refinery Runs

Refinery runs to stills reported to the American Petroleum Institute for the week ending April 11 averaged 2,371,000 barrels while stocks of gasoline as of April 11 amounted to 46,757,000 barrels. On a Bureau of Mines basis, runs to stills probably averaged 2,442,000 barrels last week, an increase over the preceding week of 143,000 barrels a day. According to the limit prescribed on the accompanying chart for April, the daily average throughput of crude at United States refineries was approximately normal last week. However, stocks of gasoline increased over the preceding week to the extent of 681,000 barrels, indicating that consumption was not up to expectations.

The fact that refinery runs of crude have been consistently in excess of domestic production for a considerable period of time is decidedly pleasing. Throughout the greater part of last year, runs to stills were considerably below domestic crude production, while imports represented an additional excess supply above the surplus of domestic crude. Since the week of December 13, 1930, however, runs to stills have exceeded domestic production by a considerable margin, resulting in a substantial withdrawal of domestic crude from storage. With the outlook for increased gasoline consumption immediately ahead, there is substantial evidence to indicate that runs to stills will be increased further. With gasoline stocks only slightly above normal, there is every reason to believe that substantial withdrawals from storage will necessarily have to be made with the result that the demand for crude will also be materially accelerated.

Austin, Texas.—The oil and gas ratio bill was killed in committee. House bill 550, which passed the committee would require each filling station to post the price and the chemical analysis of all oils and gasolines sold, with a uniform gasoline price holding good for the state as a whole. The bill also provides adjustments for transportation costs and a uniform price for same grade and quality of crude in all parts of the state with adjustments for transportation charges.



MARKET SECTION

Dumping of East Texas Oil Is Expected to Be Checked

Dumping of East Texas high gravity crudes on Mid-Continent, Coastal and Middle Western market centers at distress prices is expected to be checked should the Texas Railroad Commission be successful in its efforts to force ratable takings of crude from all properties by shippers and carriers. Crude transactions between operators and small companies and independents with tank car racks now involve prices ranging from 20 to 25 cents per barrel at the well, and promise of more equal distribution of market relief has served to check the decline in price.

Until definite steps were taken to curb the growth of production in Rusk and Gregg Counties there was danger of the price dropping to less than 20 cents per barrel. Rumors of much cheaper sales are in circulation, but there are other considerations involved.

East Texas flush fields have succeeded in creating a market for about 200,000 barrels daily since the middle of last week, and the trend continues upward as additional railroad and trunk line facilities are made available. Humble Oil & Refining Company, Houston Oil Company and Magnolia Petroleum Company have lately been handling more than half of the entire production of the district.

None of the important producers, purchasers and shippers has elected to enjoin the commission from carrying out its program of equalizing oil withdrawals among all properties through court action, although one injunction granted to Carl Estes, newspaper editor of Tyler, and associates, removes their three small leases in the semi-depleted section of the Joiner field from proration restrictions.

Official Motor Vehicle Data Shows Slight Gain

Washington, D. C.—Official motor vehicle registration data for 1930, released by the Bureau of Public Roads, Department of Agriculture, shows a total of all motor cars, taxi-cabs and trucks of 26,523,779, as against 26,501,443 in 1929. The total registration for 1930 includes 23,042,840 automobiles, taxis and busses, a decrease of 78,749 from the 1929 total; the registration of trucks and road tractors amounted to 3,480,939, a gain of 101,085 over 1929. New York and California each reported more than 2,000,000 passenger vehicles and motor trucks registered in 1930, while Illinois, Michigan, Ohio, Pennsylvania and Texas reported more than a million registrations. The total amount of revenue collected in registration fees, licenses and miscellaneous taxes during 1930 was $355,704,860.

Washington, D. C.—The United States Supreme Court, Monday, April 13, affirmed a decision of the Fifth Circuit Court of Appeals upholding the right of a state to impose taxes upon income derived from the sale of oil and gas produced under leases from the state.

The case was brought by Group One Oil Corporation, holding leases granted by the state of Texas, which leases it contended were instrumentalities of the state for the development of its public domain and that income therefrom was exempt from tax. The court, however, held that the oil produced on the leases passed from state to private ownership and therefore were subject to taxation.

Marketing Code Remains in Effect Indefinitely; Committees to Carry On

New York.—The National Code of Practices for Marketing Refined Petroleum Products continues in effect pending further action of the Federal Trade Commission.

Although the 60-day period, during which the commission's action of January 30 in withdrawing its approval of the code was suspended, ended April 8, the commission on that date established what is equivalent to an indefinite suspension of the January 30 order by postponing final action on the plea of the petroleum industry that the code be re-approved by the commission. The plea was presented at a commission hearing in Washington on March 31 by an American Petroleum Institute committee, with Roy B. Jones, president of Panhandle Producing & Refining Company, Wichita Falls, Texas, as chairman.

The code situation has been somewhat confused by erroneous press reports that the commission refused to extend the period of the suspension order, but these have been denied.

Refinery Patent Club Wins Before High Court

St. Louis, Mo.—Another important development in cracking process litigation transpired Monday when the United States Supreme Court upheld the case of the so-called Patent Club, permitting it to exist as such. In reversing the decision of a three-judge federal court at Chicago, the supreme court held that the Patent Club in no way restrained trade or tended to set up a monopoly through its cross-licensing agreements.

The suit involved the Standard Oil Company of New Jersey, and the Standard Development Company and its Tube and Tank process, the Standard Oil Company (Indiana), Burton process, The Texas Company, Holmes-Manley process, and the Gasoline Products Company and its Cross cracking process.

The decision is regarded as one of much importance in the clarification of cracking process litigation. There is some speculation as to the probability of Universal Oil Products Company, owners of the Dubbs cracking process, becoming a member of the Patent Club inasmuch as this company is now controlled by Standard Oil Company of New Jersey and Shell Petroleum Corporation.

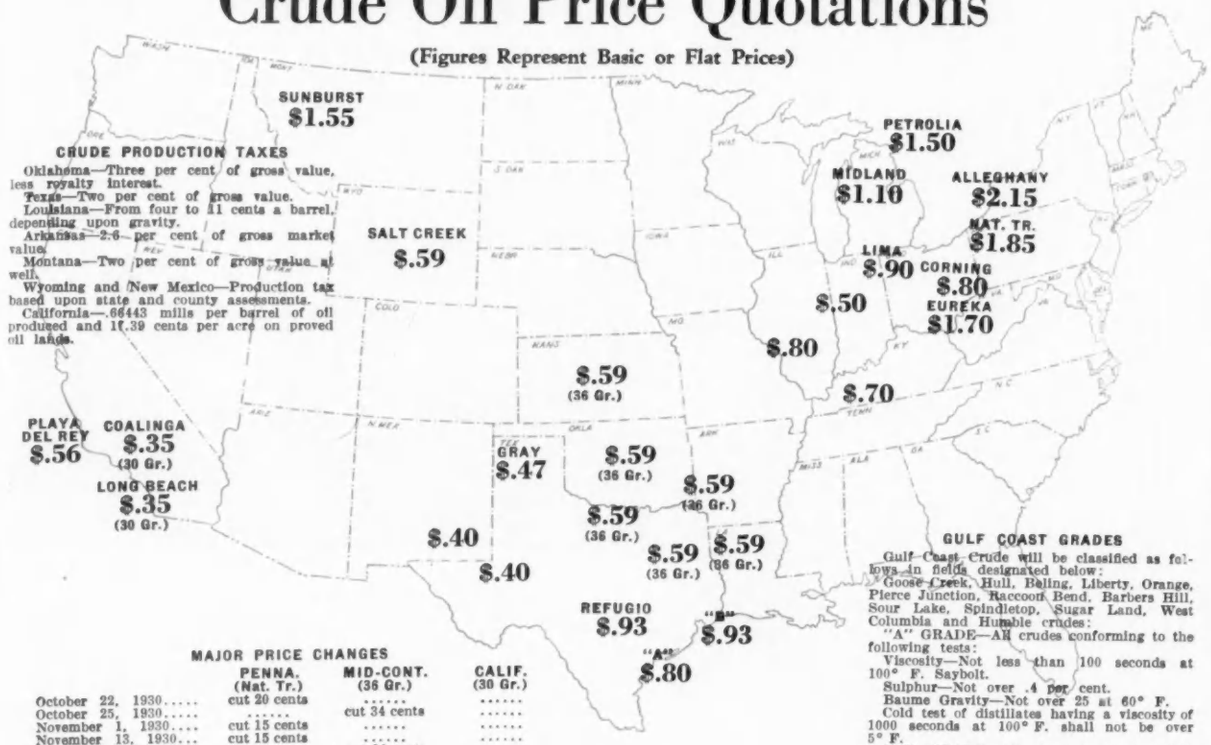
Texas Pipe Line Regulation Legislation Apparently Fails

Austin, Texas.—The bill to regulate earnings of common carrier pipe lines in Texas, scheduled to come before the house April 13 was withdrawn by Representative Dewey Young, to be brought up at a later date. This action has been construed as an indication of the ultimate failure of this bill.

Another bill that appears doomed to failure in the Texas legislature is the "divorce bill," which would take control of filling stations from major oil companies. Representative McDougald of Beaumont, Texas, stated that he did not believe that this bill could muster 20 votes in the house, and that, in his opinion, it would probably never be set for hearing.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.
Texas—Two per cent of gross value.
Louisiana—From four to 11 cents a barrel, depending upon gravity.
Arkansas—2.6 per cent of gross market value.
Montana—Two per cent of gross value at well.
Wyoming and New Mexico—Production tax based upon state and county assessments.
California—.66443 mills per barrel of oil produced and 1f.39 cents per acre on proved oil lands.

MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (30 Gr.)
October 22, 1930.....	cut 20 cents	.....	.....
October 25, 1930.....	.....	cut 34 cents	.....
November 1, 1930....	cut 15 cents	.....	.....
November 13, 1930...	cut 15 cents	.....	.....
March 5, 1931.....	.....	cut 36 cents	.....
March 30, 1931.....	.....	.....	cut to 35 cents

GULF COAST GRADES

Gulf Coast crude will be classified as follows in fields designated below:
Goose Creek, Hull, Baling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:
"A" GRADE—All crudes conforming to the following tests:
Viscosity—Not less than 100 seconds at 100° F. Saybolt.
Sulphur—Not over .4 per cent.
Baume Gravity—Not over 25 at 60° F.
Cold test of distillates having a viscosity of 1000 seconds at 100° F. shall not be over 5° F.
"B" GRADE—All Coastal crude which does not meet the test for "A" grade.

Official Postings and Differentials

(Revised to April 14, 1931)

California: (Prices effective March 30).

In all **Los Angeles Basin** fields (except Playa del Rey) oil from 14 gravity to 20.9 gravity is 65 cents. Deduct 3 cents for each degree up the scale to 30.9, making this the lowest at 35 cents. Fields in this group include **Alamitos Heights, Long Beach, Seal Beach, Torrance, Athens, Rosecrans, Dominguez, Santa Fe Springs, Montebello, Huntington Beach, East Coyote, Richfield** and **Brea-Olinda.**

Playa Del Rey: 56 cents flat, 20-26 gr.

In the **San Joaquin Valley** fields, 11 to 11.9 gravity crude is 50 cents per barrel, 14 to 14.9 gravity, 55 cents. Differential of 2 cents off each degree up the scale makes 30 gravity and above 35 cents per barrel. Fields in this group include **Coalinga, McKittrick, Kern River, Sunset-Midway, Elk Hills, Buena Vista Hills** and **Lost Hills.**

Santa Paula 14 to 19.9 gravity, 60 cents; 20 gravity, 58 cents; 21 gravity, 56 cents, and take off 3 cents for each degree up to and including 28 gravity. Orcutt 14 to 19.9 gravity, 55 cents, and take off 2 cents for each degree up to and including 29 gravity which is 35 cents.

Oklahoma-Kansas-North Texas: (Effective March 5, 1931). Below 29 gravity 43 cents with differential of 2 cents to 40 and above. Magnolia Petroleum Company posts 40 cents for below 26 gravity with differential of 1 cent to 29 gravity, 43 cents. From 29 to 40 and above, same schedule as foregoing. North Texas posting applies to oil produced in **Wichita, Wilbarger, Archer, Northern Young** and **Van Zandt** Counties. Also includes **Ranger, Mexia, Powell, Boggy Creek, Richland, Wortham, Currie, Moran** and **Nocona** crudes.

Texas Panhandle: (Effective March 10, 1931).

Gray County: Below 35 gravity 43 cents with differential of 2 cents to 40 and above. **Carson-Hutchinson Counties.:** Below 35 gravity 38 cents with differential of 2 cents to 40 and above.

East Texas: (Effective March 26). Same scale of prices as Oklahoma-Kansas-North Texas.

West Texas and New Mexico: (Effective Mar. 10, 1931) Flat price of 40 cents a barrel for Winkler, Pecos and Lea, (N. M.). Flat price of 35 cents a barrel for Crane, Upton, Howard, Ector, Ward, Loving, Crockett, Mitchell and Glasscock Counties.

Southwest Texas. (Effective Mar. 10, 1931).

Refugio: Heavy oil, below 25 gravity, 69 cents; Light crude, 25-25.9 gravity, 71 cents with differential of 2 cents to 40 and above. **Mirando,** 69 cents; **Salt Flat** and **Darst Creek,** 60 cents; **Pettus,** 95 cents; **Luling** and **Corsicana heavy,** 45 cents.

Gulf Coast. (Effective Mar. 10, 1931).

Grade "A": 80 cents a barrel; **Grade "B"**—below 25, 69 cents with differential of 2 cents to 40 and above. **High Island,** 75 cents; **Jennings,** 80 cents; **Markham,** 50 cents.

North Louisiana and Arkansas.

Pine Island, Haynesville, Bull Bayou, El Dorado, Cotton Valley, Zwolle: Below 29, 43 cents with differential of 2 cents to 40 and above. Magnolia Petroleum Company posts 40 cents for below 26 gravity with 1 cent differential to 29 gravity, 43 cents. From 29 to 40 and above, same schedule as foregoing. **Stephens:** Below 29, 54 cents with differential of 4 cents to 32 and above. **Smackover,** 45 cents; **El Dorado east field** 70 cents; **Bellevue,** 45 cents.

North Louisiana and Arkansas. (Effective Mar. 10, 1931).

Salt Creek: 29-29.9 gravity 45 cents with differential of 2 cents to 37 and above. **Elk Basin** and **Grass Creek,** 90 cents; **Big Muddy,** 65 cents; **Lance Creek,** 98 cents; **Rock Creek** 66 cents; **Mule Creek,** $1.20; **Rex Lake,** $1.10; **Osage,** 50 cents; **Cat Creek,** $1.25; **Pondera,** $1.45; **Sunburst,** $1.55; **Hogback, N. M.,** $1.40.

Eastern States: (Effective November 13, 1930).

Bradford, Allegany district, $2.15; **National Transit** oil, $1.85; **Southwest Pennsylvania** oil, $1.80; **Eureka P. L. (W. Va.),** $1.70; **Buckeye P. L.** oil, $1.45; **Corning** crude, $1.15; **Somerset** in Eureka Lines, 75 cents; **Ragland,** 60 cents; **Oil City, Ky.,** 70 cents.

Michigan—Midland, $1.10; **Muskegon,** below 29 gravity, 65 cents with differential of 4 cents to 35 gravity; 31-31.9, 92 cents with 3 cent differential to 44 gravity and above.

Central States: (Effective March 5, 1931).

Wooster, 99 cents; **Lima,** 90 cents; **Waterloo,** $1.20; **Indiana,** 50 cents; **Princeton,** 80 cents; **Illinois,** 80 cents; **Western Kentucky,** 75 cents.

Canada: (Effective October 28, 1930).

Petrolia, $1.50; **Oil Springs,** $1.57.

YOU CAN STOP A WEDDING

BY MERELY OBJECTING

BUT IT'S AN UNALTERABLE SITUATION WHEN YOUR TUBING "GETS HITCHED" TO THE BOTTOM OF THE WELL

When your tubing "falls," a little "ceremony" takes place that only lets you in for the expense: Ruined tubing; Bottled up production; A fishing job; Increased payroll; Perhaps a ruined well.

Unless you've provided for the situation with a Guiberson Catcher. If so, your tubing doesn't even fall, to begin with.

The Guiberson Catcher stops a string of falling tubing within three inches, neatly and positively. The strong spring operates with or without fluid in the hole. The heavy stricker weight overcomes the retarding action of mud or paraffin. Dove-tail tracks guide the slips instantly and accurately to the casing walls. A Guiberson Catcher is better than a Spanish "Duenna" when it comes to looking after your tubing.

NEW DUPLEX CATCHER

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Tariff Commission Analyzes Costs of Crude Production

The average cost of production of crude petroleum at the well, for 1927, 1928 and 1929, in Oklahoma, Kansas, Texas, Arkansas, Louisiana and New Mexico was $1.10 per barrel, according to a comprehensive survey recently made by the United States Tariff Commission. The cost of transporting this oil to the Atlantic Seaboard was 88 cents, including pipe line charges to Gulf Ports, a purchasing charge of 10 cents a barrel, and tanker charges from Gulf Coast to Atlantic seaboard. The total cost of oil delivered at Atlantic Seaboard was, therefore, $1.98 per barrel. This cost was computed on the basis of "company interest oil," i. e., royalty oil has not been included in total production, and includes interest at six per cent on the investment of the companies.

The cost of production of crude in the Maracaibo Basin of Venezuela in 1929 was 56 cents at the point of transfer to ocean tankers. Transportation and other charges necessary to deliver the oil to the Atlantic Seaboard amounted to 23 cents, making a total of 79 cents, cost delivered at Atlantic Seaboard refineries. This figure was computed on the basis of company interest oil and includes interest at six per cent on the investment of the companies.

An interesting angle developed by this survey is that comparison of costs between domestic and South American oil, delivered on the Atlantic Seaboard, must necessarily be influenced by differences in quality of the oil and their value for refining purposes. For example, it is pointed out that while there is a considerable difference in the delivered cost on the Atlantic Seaboard between Venezuelan and domestic crude, there is also a considerable difference between the yields of gasoline obtained from the respective oils. The domestic crude refined on the Atlantic Seaboard during the period covered yielded, largely by cracking processes, 36 to 44 per cent of gasoline, while Venezuelan crude yielded only from nine to 12 per cent gasoline and 75 to 83 per cent fuel oil. Another difference pointed out is that the value of products obtained from a barrel of domestic crude was $2.97, whereas Venezuelan oil only showed a total product value of $1.15 a barrel. The difference, however, is to some extent offset by refining costs, although no specific information was obtained in that connection.

Production Costs Comparison

An accompanying tabulation is a comparison of production costs, setting forth details per barrel for average Mid-Continent-Gulf Coast oil, and Venezuelan oil.

In 1929 nearly five barrels of Venezuelan crude would have been required by the refineries on the Atlantic Seaboard to produce an amount of gasoline equal to that which was produced from domestic crude. In general, therefore, the characteristics of domestic and Venezuelan crudes are so different that the former is run chiefly for gasoline, while the latter is refined primarily for fuel oil. Analysis of refinery yields for both types of oil show clearly the difference in their characteristics. These are given by the Tariff Commission as shown in the table of page 60.

Although in the United States as a whole, for each of the three years, the average unit cost of production was higher for the small companies than for the large companies, there are numerous exceptions to this rule in the individual states. In the entire group of Eastern States taken together the average costs of the small companies were lower

Average Cost Per Barrel (Company-Interest Oil) At Wells in the Mid-Continent-Gulf Area, Large and Small Companies Combined, 1927-1929

(Cost per barrel)

	1927	1928	1929	Weighted average 1927-1929	Per cent
Production: (thousand barrels)	379,664	383,158	417,090	1,179,912	.....
Expenses:					
Depletion of leasehold	$0.13	$0.11	$0.11	$0.12	10.91
Amortization tangible development	.18	.16	.15	.16	14.55
Intangible development	.28	.22	.24	.24	21.82
Current operating	.28	.27	.27	.28	25.45
General and administrative	.30	.29	.27	.29	26.36
Total expenses	1.17	1.05	1.04	1.09	99.09
Deduct gas sales and miscellaneous revenue	.06	.07	.08	.07	6.36
Net cost, excluding interest	1.11	.98	.96	1.02	92.73
Interest at six per cent on investment	.09	.09	.08	.08	7.27
Net cost including interest	1.20	1.07	1.04	1.10	100.00
Average sales value at well	1.31	1.16	1.28	1.25	.....

Unit Cost Per Barrel of Venezuelan Oil Delivered At Loading Point for 1927-29, and Sales Value of Production for Same Period

Item	1927	1928	1929	3-year cost
Expenses:				
Depletion	$0.0273	$0.0225	$0.0159	$0.0210
Amortization	.0815	.0626	.0694	.0694
Intangible development	.1806	.0925	.0935	.1107
Operating	.1274	.1127	.0850	.1032
General and Administrative	.2456	.1799	.1684	.1880
Total expense	.6624	.4702	.4332	.4923
Less miscellaneous revenue	.0066	.0061	.0128	.0092
Net cost	.6558	.4641	.4204	.4831
Transportation to loading point	.0937	.0840	.0769	.0828
Net cost at loading point	.7495	.5481	.4973	.5659
Interest on investment	.1229	.0790	.0642	.0811
Net cost and interest	.8724	.6271	.5615	.6470
Sale or transfer value of production	.9353	.6451	.6044	.6853

in each year than those of the large companies, and the same was true in a number of individual states in other regions of the country. It is impossible to determine the relative efficiency of production of large and small concerns from general averages for large areas. Costs differ widely in different fields of the same state and the relation between the general average cost for large and small companies in a state as a whole may be greatly affected by the geographic distribution of the wells of the respective groups of companies. West Virginia was the only Eastern state in which the large company group showed a profit for all three years while in that state the small company group showed a loss in all three years. On the other hand, the small companies in Illinois and Pennsylvania showed a profit in all three years, while the small companies in New York showed a profit in two years out of three.

In the large company group, for the three-year period covered, profits were shown in California, Oklahoma, Texas, Kansas, Wyoming, Colorado, Montana, Illinois and West Virginia. Losses were incurred in Arkansas, Louisiana, New Mexico, Indiana, Ohio, Kentucky and Tennessee. Among the small companies, profits were reported in Texas, Oklahoma, Arkansas, Kansas, Wyoming, Illinois, Pennsylvania and New York. Losses were incurred in California, Louisiana, Montana, Indiana, Ohio, Kentucky and West Virginia. For the United States as a whole, the large companies showed a larger profit than the small companies, by reason of lower unit costs for the large companies.

Following is the total unit cost of production in the United States for the three-year period covered, comparing large companies and small companies, and their relation to average sales value:

	Large Companies	Small Companies
Average cost per barrel including interest	$1.0680	$1.2598
Average sales value per barrel	$1.2432	$1.2701
Margin	$ .0897	$ .0103

Detailed cost data for individual fields of the United States shows considerable variation. For example, the three-year average revealed costs ranging from a minimum of 23 cents a barrel at Smackover, Arkansas, to a maximum of $4.31 a barrel in West Virginia. A further study of production costs by gravity of oil produced showed that there was practically no difference in cost by gravity of oil obtained. In a few instances, high gravity oil was shown to have cost more to produce than low gravity oil, but the difference was due to larger expenditures in developing high gravity oil production.

El Dorado, Arkansas.—Purchase of East Texas crude for use in south Arkansas refineries continues among refiners in this territory. During the past week Kettle Creek Refining Company bought 20,000 barrels of East Texas crude at 35 cents per barrel f.o.b. tank cars at Kilgore, Texas, for use in its El Dorado refinery. The freight rate from Kilgore to El Dorado is 11 cents per 100 pounds.

Domestic Crude

Typical Yields of Finished Products, 1927-1929
Domestic crude, Atlantic Coast refineries

	Thousand barrels			Per Cent			Value refined product per barrel crude		
	1927	1928	1929	1927	1928	1929	1927	1928	1929
Crude runs to stills*	117,332	113,249	117,933	....	....	....	.....	.....	.....
Refined products:									
Gasoline	42,532	44,591	52,172	36.25	39.37	44.24	$1.280	$1.606	$1.694
Kerosene	10,413	8,563	8,091	8.87	7.56	6.86	.244	.250	.227
Gas oil and fuel oils	42,637	35,548	34,890	36.34	31.39	29.58	.709	.474	.382
Lubricants	10,144	10,817	10,874	8.65	9.55	9.22	.430	.494	.554
Wax	824	841	950	.70	.74	.81	.055	.081	.069
Coke	695	626	817	.59	.55	.69	.005	.006	.007
Asphalt	3,790	6,036	518	3.23	5.33	.44	.059	.118	.008
All other	1,134	1,316	1,463	.97	1.16	1.24	.020	.026	.032
Unknown	....	....	2,093	...	...	1.77	....	...	...
Loss	5,163	4,911	6,065	4.40	4.35	5.15	...	...	...
Total	117,332	113,249	117,933	100.00	100.00	100.00	2.802	3.055	2.973
Cost of crude delivered to Atlantic coast refineries per books of refineries	....	....	....	....	....	....	2.280	1.972	2.138

*From U. S. Bureau of Mines Reports.

Venezuelan Crude

Typical Yields of Finished Products, 1927-1929
Venezuelan crude, Atlantic Coast refineries

	Thousand barrels			Per Cent			Value refined product per barrel crude		
	1927	1928	1929	1927	1928	1929	1927	1928	1929
Crude run to stills*	9,979	37,217	30,471	....	....	....	.....	.....	.....
Refined products:									
Gasoline	1,167	3,896	2,820	11.69	10.47	9.26	$0.400	$0.367	$0.305
Gas oil	161	454	378	1.61	1.22	1.24	.032	.012	.008
Fuel oil	7,576	30,986	24,712	75.93	83.26	81.10	1.218	.802	.689
Miscellaneous product	955	1,363	2,210	9.57	3.66	7.25	.238	.077	.151
Loss	120	518	351	1.20	1.39	1.15	....	....	....
Total	9,979	37,217	30,471	100.00	100.00	100.00	1.888	1.258	1.153
Cost of crude delivered to Atlantic cost refineries, per books of refineries	....	....	....	....	....	....	1.490	1.041	1.021

*Amounts of Venezuelan crude shown by refineries giving data on yields of refined product from Venezuelan crude.

Conservation Board Approves Modified "Texarkana" Plan

(*Continued from page 22*)

"I am pleased to advise," he wrote, "that the Federal Oil Conservation Board believes that this program of the states is constructive and it will give the states what cooperation it may, looking toward a conservation agreement having congressional approval. The first of your committee's three recommendations will accordingly be carried out by continuing the work of the board's voluntary committee on economics to make periodic examinations and formulating the national and regional forecasts of supply and demand, to be transmitted for consideration of the states through the interstate committee.

"The other two recommendations call for action by the states, rather than the board. This board has in the past suggested an interstate agreement to provide for uniformity in state conservation laws on certain major points, such (1) unit operation, (2) protection against waste and consequent over-production, and (3) conservation of gas energy, coupled with co-ordination between the states of their conservation efforts under an arrangement for liaison which will insure that curtailment in one state will not be followed, as at present, by unproportional production for another state.

"This board stands ready, therefore, to give what assistance it can in working out a rational plan which must, however, adequately safeguard the national interests. The states, which possess the necessary police power, must be the active factors.

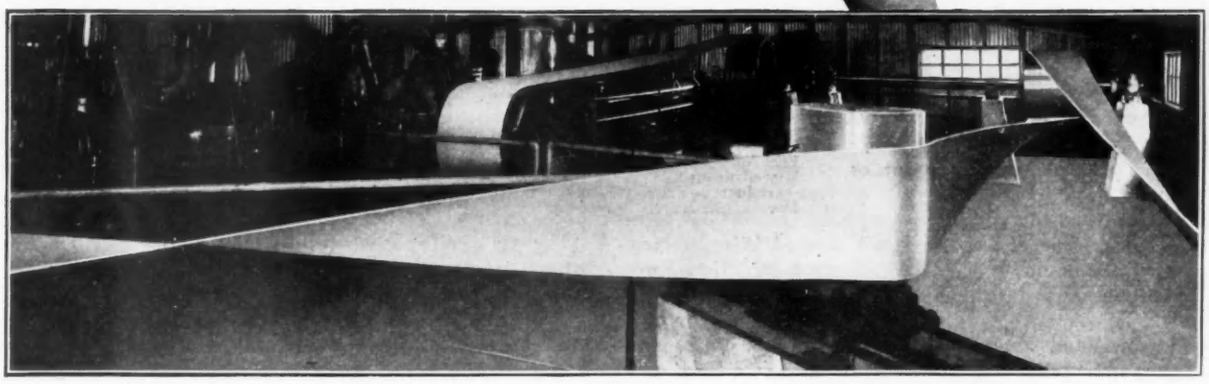
Await States' Action

"We shall accordingly await the further action of the respective states on the two features of your committee's

"MONARCH"

Pumping and Drilling Belt

Stands the Gaff . .



. . . Cuts Costs

"Monarch" Brings An Honest Service Record to Toughest Conditions . .

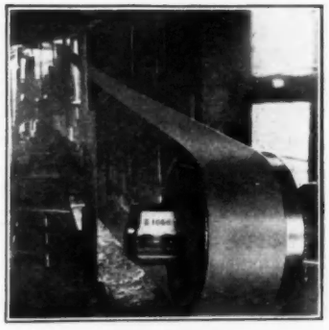
Put this rugged belt to work for you . . . check its performance . . . and see the difference in operating costs!

On the severest jobs, *Monarch* Pumping and Drilling Belt delivers a steady, smooth and powerful grip. Twists, strains, shocks, overloads and alternating speeds hold no terrors for *Monarch*.

Maximum pulley contact means minimum slippage.

Monarch cuts costs because it is superflexible — no folds or seams. Built of special tight-woven duck, with edges sealed against wear and moisture. Fasteners hold tight.

Specify *Monarch* and you specify dependability at lowest cost.



12" 6-Ply MONARCH installed on Beam Pumper

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MECHANICAL RUBBER GOODS FOR EVERY INDUSTRY

OIL FIELD DISTRIBUTORS

OIL WELL SUPPLY CO.

recommendation which called for state action, i.e., authorization by the legislature of negotiation of such an interstate agreement, and continuation, meanwhile, of some liaison body, such as your present committee. We assume that we will hear from you when we can be of further assistance. The sooner that unified and constructive action is taken by the states, the better for everyone concerned."

Recommendation that President Hoover be asked to aid the industry by invoking provisions of the tariff law dealing with unfair practices in import trade, under which the president, after hearing, may exclude all merchandise unfairly imported, was made to the advisory committee by T. F. Hunter, president of the North Texas Oil & Gas Association. He recommended, however, that importations be limited to 20 per cent of the 1930 imports, so that the United States cannot be accused of having broken the Geneva treaty binding signatory nations to impose no barriers to international trade.

Mr. Hunter declared that the government should intervene because, if the present importers adhere to a restriction agreement, there is still no way of preventing others from importing. As a basis for invocation of the tariff provisions, it is charged that the major importing companies have monopolized the retail sale of oil and have adopted unfair methods in their marketing activities.

His proposal also contemplates strict proration of all domestic fields under the direction of the advisory board, with national and state legislation making pipe lines common carriers so that the government may exercise control of rates. An additional curtailment of 200,000 barrels daily by domestic producers is recommended, together with the fixing by the oil states of a price of 36° gravity oil at $1.75 per barrel.

Economics and Technology Before Refining Division

St. Louis, Mo.—The general sessions of the first mid-year meeting of the Refining Division of the American Petroleum Institute here this week are divided between the discussion of refining economics and technology. The refining division, through its economic committee headed by R. C. Holmes, will present a statistical set-up for the industry's guidance during the period from April through September. The purpose of the report is to furnish the industry, and particularly the refining branch, a yardstick by which to measure its operations during that period.

The report of the refining economic committee follows a similar report which was released last week by the secretary of the Federal Oil Conservation Board in preliminary form. The two reports will be released simultaneously at a general assembly to be held Wednesday night.

In connection with these reports the Oil States Advisory Committee, made up of delegates from Oklahoma, Texas and other oil producing states, is sitting in on committee meetings.

Following the complete reports of the two economic bodies the board of directors of the American Petroleum Institute will meet Thursday. Whether they will take any action on these reports other than the customary approval is not known.

Technical sessions of the refiners meeting will be concerned with the progress made toward a standardized method of measuring knocking tendencies of automotive fuels, the continued study of means of combatting corrosion of refinery equipment, and the solution of the vapor locking tendencies of motor fuels in modern automobile engines. Further work in the solution of the problem of a standard testing procedure for determination of anti-knock properties of gasoline will be done immediately by the cooperative fuel research committee, which is sponsored by the federal government and the petroleum refining and automotive industries. It is planned to express knock ratings in octane number, thus replacing the various confusing knock ratings, such as benzol equivalent previously used.

Vapor lock, or the boiling of gasoline in the fuel feed systems of motor cars, causing stoppage of the motor in recently built cars, may be eliminated by altering the vapor pressure of the gasoline or by redesigning or relocating the fuel feed systems, according to Dr. O. C. Bridgeman of the Bureau of Standards. He states that the solution to this problem must come through cooperation between the manufacturers of motor fuels, who must reduce the propane content of the gasoline, and the automotive builders who might well consider changes in design of their fuel feed systems.

The use of alloy steels is advocated as one means of combatting corrosion of refinery equipment, especially in fabrication of cracking units and furnace tubes. Such alloys as iron-chromium-nickel seem to have met the demand for tube material having sufficient resistance to corrosion, oxidation, and elevated temperatures attending the processing of corrosive, high-sulphur oils. Corrosion of other types of refinery equipment is ascribed to both impurities in water used for cooling and condensing purposes and the oil processed, and these agents are as destructive in the producing and transportation branches of the petroleum industry as they are in refining. Removal of the water content of the crude oil, it is said is an aid in eleminating corrosion.

Oklahoma Production Tax To Be Collected Monthly

Oklahoma City, Oklahoma.—An act relating to the collection of gross production taxes on oil, natural gas and casinghead gas which provides for the payment of the tax monthly, makes the tax a lien on the producer's property, vests authority in the Oklahoma Tax Commission to compute and collect the tax, authorizes rules and regulations, declares this act supplementary to existing laws and repeals only so much thereof as is necessary to make the new law operative, has become law and becomes operative June 30, 1931.

This new law supplements in part a law previously passed which provided payment of production taxes quarterly. The new law provides that the tax is due the first of the month and if not paid by the last of that month, the tax shall become delinquent and shall be collected in the manner provided by law for the collection of delinquent gross production taxes.

Information required by the new law, of the payee, includes: a description of the property, name of producer, gross amount of oil, natural gas or casinghead gas produced, the total value of the product or products, and the prevailing market price of the product not sold at the time of production.

Crude Purchase Curb Cuts Deep Into Older Texas Fields' Quotas

Fort Worth, Texas.—Curbing of crude purchases in the older prorated areas of Texas has cut deeply in the production allowances of a number of these fields during the past month, and the decline is caused by buyers shifting their attention to distressed priced high gravity sweet oil being offered in the flush fields of East Texas. Substantial revisions in production allowances of more than a half dozen of the systematically prorated fields took place within the past month, with cuts more than double the gains obtained by some of the fields.

Acting on recommendations of the Central Proration Committee of Texas, the Texas Railroad Commission put into effect a cut of 19,500 barrels in the allowable production of the Yates field, which receives a quota of 70,000 barrels daily beginning April 4 until the remainder of the proration period. Some operators protested this sharp decrease without success, as the three major purchasers in the field approved the cut, and allowable is to be determined by nominations of purchasers. Winkler County contributed a paper decline of 12,000 barrels in allowable production, having been cut from 60,000 to 48,000 barrels effective April 1, but the new quota is all the wells can produce. In contrast to these reductions in West Texas areas, the Howard-Glasscock County district scored a new allowance of 30,844 barrels beginning April 1, as compared to 20,925 barrels daily on March 1. This gain of 9919 barrels was obtained through increased purchases by Shell Petroleum Corporation, Cosden Oil Company and others, and is probably due to the fact that the price is only 35 cents per barrel, regardless of gravity and quality. Ector County's allowance advanced from 6115 to 6590 barrels daily beginning April 1 as result of Burford Oil Company having requested more 35 cent oil for its refinery at Pecos.

The Texas Panhandle was assigned a production allowance of 36,990 barrels daily at the beginning of the April period, or 3000 barrels less than the nominations of purchasers one month previous. This district has been particularly hard hit by the loss of markets to East Texas producers. Actual production in the Panhandle is running considerable more than the figure allotted by proration because Danciger Oil & Refining Company and Sunray Oil Company and affiliated companies have enjoined the commission from prorating their respective properties, with adjoining well owners likewise being allowed to produce oil at capacity.

A cut of 10,000 barrels in allowable production of the Darst Creek field and 5458 barrels for the Salt Creek field was put into effect March 14 because buyers have shifted their attention to East Texas. The former now has a quota of 20,000 barrels daily, or 77.22 barrels average daily per well, while the Salt Flat field is restricted to 12,765 barrels daily, or 38.68 barrels daily average per well.

Van at New Peak

Van field advanced another 5000 barrels beginning April 1 to a new peak level of 40,018 barrels daily, and will enjoy similar increases on May 1 and June 1 to make it 50,000 barrels daily. These increases were obtained last January in anticipation of a disturbing market influence from East Texas flush fields. All the production is being absorbed by Pure Oil Company and Humble Oil & Refining Company.

Operators in North Texas and Central West Texas were allotted a daily production quota of 63,000 and 33,500 barrels, respectively, with the latter to range above 24,440 barrels daily until May 15, if market can be had, by the April 4 proration order of the Texas Railroad Commission. Prevailing market outlet in each district is considerably below the levels authorized by the commission, and there is no indication that buyers will stimulate their takings in the near future. These two areas have been producing up to the market demand, and little hope prevails that increased allowance will materialize, with largest purchasers booking

(*Continued on page 66*)

Latest Proration Data on Texas-New Mexico Fields

	No. Wells	Official Daily Pot'l Production	Maximum Daily Prod. Allowance	Percentage Pot'l Prod. Allowed	Daily Average Yield Per Well
TEXAS PANHANDLE—					
Gray County	753	97,400	25,177	25.85	33.44
Hutchinson County	922	25,666	7,503	29.23	8.14
Carson County	239	12,342	3,096	25.09	12.95
Moore County	23	3,353	1,009	30.09	43.87
Wheeler County	43	695	203	29.21	4.72
Potter County	1	7	2	28.57	2.00
Total	1,981	139,463	36,990	26.52	18.67
WEST TEXAS—					
Yates	401	5,507,504	70,000	1.27	174.56
Crane-Upton	603	49,849	18,691	37.49	30.99
Howard-Glasscock Dist.—					
3000-foot wells	93	14,809	7,263	49.04	78.09
2500-foot wells	53	10,926	4,754	43.51	89.69
2200-foot wells	85	42,587	14,439	33.90	169.87
1800-1300-foot wells	302	7,932	4,388	55.32	14.53
Total	533	76,254	30,844	40.45	57.87
Ector County	80	25,385	6,590	25.96	82.37
Winkler County	520	96,559	48,000	49.71	92.31
Total	2,137	5,755,541	174,125	3.03	81.48
CENTRAL WEST TEXAS—					
All fields	9,001	[1]47,332	26,430	55.84	2.94
NORTH TEXAS DISTRICT—					
New Castle District	154	12,623	3,786	29.99	24.58
N. Tex. Dist. (Misc'l)	15,022	[2]79,875	39,837	49.87	2.65
CENTRAL EAST TEXAS—					
Van	227	[3]441,092	40,018	9.07	176.29
SOUTHWEST TEXAS—					
Darst Creek	259	150,592	20,000	13.28	77.22
Salt Flat	330	[4]18,223	12,765	70.05	38.68
Pettus	19	[5]6,102	4,500	73.74	236.84
NEW MEXICO—					
Hobbs	142	1,122,963	32,532	2.90	229.10
Eunice	8	.....	400	...	50.00

[1]All wells limited to 4-8-14 bbls. marginal allowance.
[2]Last re-gauge for potential taken Jan. 1931.
[3]Potential through 11/16-inch choke only.
[4]Effective 3-14-31 to 9-14-31.
[5]Schedule Jan.-Feb.-March, 1931, still in effect.

Oil and Gas Pipe Line Activities

Direct Movement of East Texas Oil By Pipe Line Is Promised

Tyler, Texas.—Direct movement of East Texas crude by pipe line facilities of Sinclair-Texas Pipe Line Company and Prairie Pipe Line Company to coastal and middle western refineries of Sinclair Refining Company is to materialize within a few months as result of the former having announced plans for a 90-mile, 12-inch line to extend from the west edge of the Joiner field to a point near Mexia. Sinclair-Texas Pipe Line Company officials were engaged in selecting pump station site near the Smith-Rusk County line early this week, and it is proposed to expedite the construction work, as Sinclair Oil & Gas Company is conducting a large development campaign in East Texas proven areas.

An attractive joint tariff has been worked out by the two pipe line concerns, and no additional lines will be required of Prairie Pipe Line Company to make deliveries to the north and south after the East Texas crude is tendered at its Teague station, located southeast of Mexia. Prairie Pipe Line Company has 25,000 barrels of capacity on north bound shipments from Teague station, while 30,000 barrels daily can be conveniently handled south to the coast via the looped eight-inch system of Pure Oil Pipe Line Company of Texas, wholly owned subsidiary of Prairie Pipe Line Company. The latter unit can be stepped up to 50,000 barrels capacity by finishing out present loops. This arrangement with Sinclair-Texas Pipe Line Company restores Prairie Pipe Line Company's trunk line unit across Texas to an active basis, after having sustained a big loss in shipments since Prairie Oil & Gas Company withdrew from the Mid-Continent as a general purchaser.

Sinclair Oil & Gas Company is operating two tank car racks and gathering systems in Rusk County, with the bulk of its shipments consigned to Sinclair Refining Company's refinery and tanker terminals near Houston. These tank car shipments of crude have varied from 15,000 to 20,000 barrels daily for the past month, with considerable outside oil that is being purchased from operators in Joiner and Kilgore fields included.

Texas Company to Start Using New Pipe Line System in May

Houston.—The Texas Pipe Line Company expects to begin operation of its new East Texas pipe line system during the first week in May, with facilities for handling as much as 25,000 barrels of Rusk and Gregg Counties crude daily.

Work of laying the 50-mile, 10-inch electric welded line from Kilgore to Douglass station in western Nacogdoches County was about 50 per cent complete early this week, with one construction crew proceeding southward from Kilgore terminus and another working northward from the other end.

Work has already been completed on construction of the new Douglass pump station, near the town of Douglass and about 12 miles west of Nacogdoches. The station will employ two Diesel engines, and adjacent to it the company is erecting four 55,000-barrel steel tanks. On the 50-mile line there will be three field pump stations, the first or most northerly in the Kilgore pool, the next at Reeds a few miles farther south, and the other to be known as Joiner and located in the Joiner field.

At Douglass the new line will connect with the already existing trunk line of The Texas Pipe Line Company running from Corsicana via San Augustine to Port Arthur on the Gulf Coast.

From Douglass station the East Texas crude will be routed both south and north, the plan being to pump about 10,000 barrels daily via the San Augustine route, while 15,000 barrels daily will be pumped to Corsicana and at that point into The Texas Pipe Line Company's existing system which extends southward via Humble station, Harris County, to tidewater. Between Corsicana and Humble the company is now erecting three new electric stations. Motor driven centrifugal pumps which have been in service in other stations have been transferred to the new station sites and are being installed. They will be ready for use by the time the new East Texas line is completed.

The first of these new electric pump stations will be at Teague, the second at Bedias, Grimes County, and the third at Huffsmith, Harris County.

Plans for East Texas Pipe Line Virtually Abandoned

Houston.—Gulf Coast Pipe Line Company, which is owned by the Moody-Seagraves-Morgan interests, has practically abandoned its plans for construction of a 190-mile 12-inch oil pipe line from the Rusk-Gregg County fields, East Texas, to the Gulf Coast. For several weeks it had contemplated building a crude carrier from the Kilgore and Longview areas to the Neches River near Beaumont, where sea-going vessels would have been loaded over Yount-Lee Oil Company's docks.

The large block of productive acreage purchased by Yount-Lee Oil Company from Farrell and Moncrief et al, who were instrumental in discovering the Longview pool, would have constituted part of the reserve justifying construction of the proposed pipe line, together with considerable producing properties of the Moody-Seagraves-Morgan interests themselves; while the line would also have been operated as a common carrier.

Cranfill-Reynolds Plans Line To Link All East Texas Areas

Longview, Texas.—Installation of a crude oil gathering system that will link together the Joiner, Kilgore and Longview fields was started April 11 by Cranfill-Reynolds Company, Houston, and plans are to be in readiness to start tank car shipments of oil over a 50-car capacity rack to be built near Willow Springs on the Texas & Pacific Railroad by May 1. Ford, Bacon & Davis Construction Company was awarded contract for the laying of this system, which will be the first in the district to have a private hook-up with all three areas. Cranfill-Reynolds Company is controlled by Moody-Seagraves interests, who are already represented in the Joiner field with a rack and gathering system.

Cranfill-Reynolds Company have broken ground for erection of five 55,000-barrel steel tanks on the Elsie Calvin farm, Marshall Mann Survey, located southwest of Longview. About 23 miles of combination four-, six- and eight-inch pipe will be used in the main line system that will tie into this tank farm and rack.

Personal Mention—Men You Know

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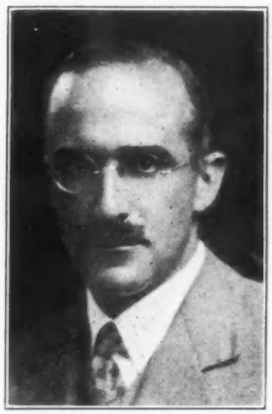
Ulick de Burgh Daly, president, Shell Petroleum Corporation since September, 1928, and a director of Shell Union Oil Corporation of New York, announced his resignation from both concerns effective April 13.



U. DE B. DALY

Mr. Daly refused to comment on his resignation but it is understood that it came as a result of differences between him and other Shell Petroleum Corporation officials on problems of distribution.

Mr. Daly came to St. Louis from Japan in 1926 where he had worked for Royal Dutch Shell. He was at first vice president and assistant to the president of Roxana Petroleum Company.

Mr. Daly has announced no plans for the future. Thomas F. Lydon, first vice president, Shell Petroleum Corporation, will be in charge until other arrangements are made.

Thomas L. Coplin, 55, deputy supervisor of the oil and gas division of the Texas Railroad Commission in the North Texas district for the past 12 years, died at his home in Wichita Falls April 13.

C. D. Fletcher, age 33, consulting geologist of Jackson, Mississippi, was fatally injured in a peculiar accident at Riderwood, Alabama, Friday, April 3, and died the following Sunday in a Meridian, Mississippi, hospital.

Mr. Fletcher, with his associate, H. K. Toler, was doing field work and they stopped in an abandoned farmhouse to eat lunch. While eating, a part of the roof caved in, a large piece of timber striking Mr. Fletcher on the head fracturing his skull. Mr. Toler summoned aid, extricated the injured man and rushed him to Riderwood for medical aid and later he was taken to Meridian.

E. R. Brown, vice-chairman of the board of directors of Standard Oil Company of New York and president, Magnolia Petroleum Company with headquarters at Dallas, has been elected a members of the Dallas city council. Mr. Brown has been an active civic worker in his home city for a number of years.

L. P. Hammond, veteran oil producer and drilling contractor with headquarters at Wichita Falls, was seriously injured April 10 in an auto accident near Archer City, Texas, and his son, L. P., Jr., 10, was instantly killed.

J. A. Wahler, construction engineer for Lago Petroleum Company in Venezuela, is studying California methods during a brief visit to the West Coast.

JOSEPH A. WAHLER

Designing engineer, recently returned to the United States after completion of a tour of duty with Lago Petroleum Corporation, at Maracaibo, Venezuela

Robert G. Gillis has been appointed receiver in equity for Western Oil and Refining Company of Los Angeles.

J. A. W. in de Betouw Van Der Voort, petroleum engineer for Shell subsidiaries, including B. P. M., is spending a short time in California.

J. Harvey Suttles, president of Houston Ready-Cut House Company, Houston, died April 11 following a brief illness. He had been a resident of Houston for more than 30 years and for many years was engaged in the ready-cut house business.

L. R. Tilley, production superintendent for Sarawak Oilfield, Ltd., with headquarters at Miri, Sarawak, Borneo, is visiting in California.

L. P. St. Clair, president of Union Oil Company of California, has been re-elected president of the Independent Oil Producers' Agency. The election marks the twenty-fifth year as president for St. Clair. S. W. Morsehead was re-elected vice-president and W. B. Robb retained as secretary and treasurer. Other directors elected include John L. McGinn, A. J. Crites, W. H. Wardner, C. H. Harlow, J. H. Welsh, H. D. Colson, H. L. Westbrook, W. W. Colm, E. E. Baley, George R. Harrison and K. C. Wallace.

Ralph B. Lloyd, well known California operator and royalty owner, has been elected president of Oil Producers Sales Agency.

Dr. Chun Young Chan, of the Chinese Bureau of Mines, who enjoys the distinction of being the first and only Chinese petroleum engineer in the world, is touring the oil fields of the United States for the purpose of investigating geophysical prospecting methods, drilling and production practices, and refining processes on behalf of the Chinese government. When interviewed by a representative of THE OIL WEEKLY at the California oil show, Dr. Chan explained that he is particularly interested in studying the geophysical methods of prospecting em-

DR. CHUN YOUNG CHAN

ployed in the Gulf Coast, as he considers that they may be applicable to conditions occuring in the alluvial regions of China. He is also investigating refining methods, with a view to establishing a refining industry in his

country which, although one of the greatest oil markets in the world, has no refineries within its borders.

Dr. Chan remarked upon the great progress that has been made in petroleum engineering, recalling that when he attended the University of Pittsburgh, from which he was graduated in 1915, it was considered uneconomic to drill below 4000 feet, whereas nowadays production is had from depths more than twice as great. Dr. Chan took his degrees in petroleum engineering and mining engineering at the University of Pittsburgh in 1915 and 1916 and received his doctor's degree from the University of California, where he specialized in petroleum engineering, in 1922.

He stated that there are two important wildcat projects now being planned in China, but that actual drilling in both cases may be suspended until silver exchange is normalized or established. He pointed out that the Chinese dollar, normally worth about 50 cents, gold, is now quoted at about five silver dollars for one gold dollar, which has the effect of increasing the cost of machinery required for exploratory work in China by 250 per cent.

Dr. Chan explained in the course of a most interesting conversation that some 2000 wells have been drilled in the interior of China in search for brine with which to make salt, and that 80 or more of these wells have yielded showings of oil and gas. It seems that such showings are not appreciated by the Chinese salt makers, since the presence of oil in the brine results in the discoloration of their salt product.

All these wells were drilled by hand, without machinery or cable; and yet many of them exceed 1000 feet in depth and records have been preserved of wells which reached depths of 2000 feet or more. Bamboo is used for casing, and bamboo poles are spliced together and used for drilling rods. Motion is imparted to the drilling tools by means of a springboard from which they are suspended, is being the practice of the drilling crews to jump on and off the springboard to lower and raise the tools.

Dr. Chan stated that the Chinese government is planning to resume drilling and complete the testing of an area in Shensi Province formerly leased to Standard Oil Company, which suspended operations in 1915 after having drilled seven wells to maximum depths of 2500 feet. A group of Chinese bankers from Hong Kong and Shanghai also proposes to drill in the same general vicinity.

The showings of oil and gas referred to by Dr. Chan occur in Shensi and Szechuan provinces; and numerous natural seepages of oil and gas are also found in these provinces and in the Province of Kweichow and elsewhere.

Correspondence received by THE OIL WEEKLY from China refers to small-scale oil production by a Chinese company operating in Shensi Province. The company, which is managed by a Chinese engineer whose practical experience was gained in the Russian fields, operates a small refinery which produces an inferior grade of gasoline, a product which is used for the dilution of imported motor fuel sold on the local market.

Our correspondent writes that the existence of oil deposits in China is a proven fact, based on the occurence of natural seepages of oil and gas; and expresses the opinion that it is only a matter of time before these deposits will be developed. If the Nanking government is successful in the negotiation of external loans, it is said, the petroleum industry will doubtless be considered as one of many enterprises to be undertaken by the government.

A private company was recently formed to exploit the Charlanoir oil fields near the Siberian border in Manchuria; and development is expected to be commenced in Szechuan as soon as the political situation becomes more settled.

Crude Purchase Curb Cuts Deep Into Older Texas Field Quotas

(Continued from page 63)

large quantities of oil in East Texas. A bill is also pending before the state legislature that is intended to give relief for the many thousand marginal wells in the above two districts, but no provisions are made for aiding the small well owners in getting rid of the production when the exemption rule becomes a law.

Hobbs field, New Mexico, started the current month off with a production allowance of 32,523 barrels daily, or an average of 229.1 barrels daily per well. Beginning May 1, this field will be allowed to produce about 37,500 barrels daily because Shell Petroleum Corporation has increased its nominations from 11,000 to 15,000 barrels daily. This increase will partially offset the recent losses in production sustained by the Artesia, Maljamar and Eunice fields because of the complete withdrawal, and curbing of takings by purchasers. Effective April 1 all wells in the Eunice field, which has eight wells rated at a combined potential of about 4000 barrels daily, were cut to a flat quota of 50 barrels daily, regardless of potentials.

Bankers' Representatives Named on Prairie Board

Tulsa.—Stockholders of The Prairie Oil & Gas Company, meeting in Independence, Kansas, Tuesday, increased the board of directors from five to seven members and elected four men not previously represented to memberships. The board now consists of W. S. Fitzpatrick, chairman of the board, Nelson K. Moody, president and Dana H. Kelsey, vice-president and general manager. The four men elected are Elisha Walker, chairman of the Transamerica Corporation, Halstead C. Freeman, president of Chase Securities Corporation, Hunter S. Marston, president of Blair and Company, and John H. Markham, Jr., president of the Petroleum Securities Corporation of America.

Placing these four on the board gave the banking group a majority of the directorate. Horace C. Fitzpatrick, assistant to the vice-president, and John A. Hollihan, secretary of the company, were not re-elected.

The Transamerica Corporation and Blair and Company are the banking group which financed the Petroleum Securities Corporation which some two years ago bought a substantial block of Prairie Oil & Gas Company stock. The Chase National Bank comes into Prairie Oil & Gas Company's financial affairs through having the president of Chase Securities Corporation on the board.

The statement issued following the election read in part: "The new directors are all important factors in the financial world and the representation of these groups of large stockholders on the board of directors is an assurance of their activity and assistance in rounding out plans to meet readjustments taking place in the oil industry and the expansion heretofore announced as the Prairie program looking to the continuance of the important position that the Prairie has so long held in the Mid-Continent field."

This announcement also was to the effect that directors would meet later to elect officials, with no indication that any changes would be made. Officials of the company are W. S. Fitzpatrick, chairman of the board, Nelson K. Moody, president, Dana H. Kelsey, vice-president, John A. Hollihan, secretary, and A. B. Hookins, treasurer.

News From California Fields

BRAD MILLS, ***Staff Representative, Los Angeles, California***

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All California Agencies Seek to Improve Market

Los Angeles.—In a general effort to improve conditions in all branches of the industry, various agencies are working with the ultimate view of increasing crude and gasoline prices, while holding production to some level below current requirements. The major and large independent companies seem to meet on common ground, since both are affected by present low prices; but there is still a wide difference of opinion concerning methods of easing and eventually ending the depression.

The "committee of eleven" on economics will meet this week to assemble reports which will show the present production and consumption, status of production, storage and refinery requirements, and from these reports recommendations as to the solution of various problems may be made. Ralph B. Lloyd, president of the newly organized Oil Producers' Sales Agency, and also a member of the committee on economics, asked Paul N. Boggs, chairman of the statewide curtailment committee, to call the meeting.

Oil Producers' Sales Agency has grown to include many of the largest independents and was primarily organized to find a market for oil produced by members. The organization has announced that it is not a price fixing body, but wishes to function as a medium through which a market may be found and through which production may be held to requirements.

Various bills affecting the oil industry have been introduced at Sacramento. The major companies are supporting a bill which the independents claim would make the industry virtually a public utility. Substitute bills have been offered also. One bill is designed to prevent townlot drilling and would prohibit drilling near the property line in certain districts.

Unpromising Conditions Make Weed Patch Activity Needless

Bakersfield, Calif.—Increased activity in the Weed Patch district is not justified by structural conditions nor by conditions within the industry at this time, but the fact remains that seven wells are active in this new field. Shell Oil Company opened the field last year, with the completion of an 1100-barrel well above 6000 feet. Subsequently the discovery well was deepened and is now drilling ahead in shale and streaks of oil sand at 8265 feet.

The deepening of this well was a legitimate undertaking, but there is some doubt concerning the wisdom of other operations at this time, particularly one or two wells which may be off structure.

The Weed Patch field was one of the few to have been found in a flat country in the San Joaquin valley, but it bears a distinct relation to the east fringe of the valley. The formations are found much deeper than in the Kern Front and Fruitvale fields, the latter itself being in the bed of the valley.

Mohawk Oil Company is drilling two wells as indirect offsets to the discovery well but has not obtained commercial production in the first well at 6000 feet. Shell Oil Company is drilling two wells, in addition to the discovery well.

North Dome at Kettleman Now Has 24 Active Drilling Tests

Coalinga, Calif.—The Kettleman North Dome Association, by combining all drilling wells formerly operated by the various companies now members of the organization, has become the most active operator in the field, with nine wells under way and two producing wells. Drilling wells taken over include Continental Oil Company's Elliott 2-16; General Petroleum Corporation's Ochsner 2; George F. Getty's Armstrong 6-1; Milham Exploration Company's Milham 23, Milham 25 and Kennedy 1; and Pacific Western Oil Company's No. 12, No. 14 and No. 27. Producing wells include Continental Oil Company's Elliott 12-8 and Milham Exploration Company's Elliott K-1. New designations have been given the wells.

Standard Oil Company, with seven active drilling wells on the North Dome is a good second. The company's No. Fee 21-7Q is the deepest drilling well, having passed 7900 feet, while No. 29J-65 is a close second, coring ahead at 7755 feet.

Active wells on the North Dome total 24, with two drilling wells on the Middle Dome. Drilling is largely confined to two small districts which include fee land. One completion was responsible for at least four offsets.

Milham Exploration Company's Elliott 1, the discovery well, and Continental Oil Company's Elliott 12-8, will be killed by the Kettleman North Dome Association and deepened to improve the gas-oil ratio and to increase production. It has been rumored that it was not possible to kill these wells, but such a procedure now seems practical. The pressure was very high in these producers, but the natural decline has reduced it sharply. Both of these wells were completed in the top of the Temblor zone and are producing more natural gasoline than oil. Both wells are producing a small amount of free water, and deepening may eliminate this condition.

The action of two wells completed much deeper in the Temblor formation than the first producers warrants the inclusion of anywhere from 600 feet to 1400 feet below the final shutoff. The discovery well blew in and produced 61 gravity oil. The first completions were finished to include only a small amount of sand below the shoe of the shutoff string. Superior Oil Company's Huffman 1 is flowing from more than 1000 feet of sand, while Petroleum Securities Company's Felix 2 is producing from a similar amount of Temblor. The oil from these wells is a much lower gravity product than that from the wells completed in the top of the sand, but the difference in the quantity more than offsets this disadvantage.

Section 36-21-17, which lies largely outside the probable producing limits of the field, is especially active. It is entirely a fee tract and is divided among several operators. Shell Oil Company controls a 160-acre lease on the section, the Dixon tract including the west one-half of the west

one-half section. A part of this lease probably will be productive. North American Consolidated is drilling two wells on the 80-acre Blauvelt lease, a narrow tract extending the full length of the section. The company's Blauvelt 1 stands an excellent chance at production, but must still be classed in the semi-proven district. Other operators drilling one well each on Section 36 include Gordmac Trust, and Midland Exploration Company.

Wildcatting Activity Now At Lowest Level in California

Los Angeles.—California usually has from one to three wildcats on the verge of "coming in," with excitement running high; but at the moment there is not an outstanding wildcat test on the horizon. Fortunately, perhaps, most of the wells "about" to open up fields fall flat, but the reduced crop of eligible prospects for honors limits the possibility of new fields for the year.

Various deep tests, which are regarded in California as wildcats, are being drilled and there is still a full crop of this type of well.

Wildcatting in Ventura and Santa Barbara Counties has shown a gradual decline for a year, but Kern County has maintained a better average, due to the influence of the Temblor zone at North Belridge and Kettleman Hills.

Southern California, which includes the Los Angeles basin, is unusually short on its crop of interesting wildcats. Extensions and deep zones are being sought and it would not be surprising to open a new deep zone in the Los Angeles basin.

Plan Second Production Test of Lost Hills Well

Bakersfield, Calif.—George F. Getty's Lincoln 1, a deep well in the Lost Hills field, will be tested again, following the coring of a formation which showed oil and gas and no water. The well was drilled to 3940 feet and the cores between 3840 and bottom warranted a production test. A string of nine-inch casing was cemented several weeks ago at 3768 feet but tests below this shut-off were unsuccessful. A blowout resulted from striking a gas pocket, and subsequent tests proved the action of the well to have been misleading during the wild flow.

Universal Consolidated Oil Company is fishing for drill pipe at 5335 feet in No. 49, a deep test in the south part of the field. This well has been a disappointment since it supposedly reached the Temblor zone at about 5000 feet. Several tests were made, and more recently the well was deepened in search of an oil bearing formation. The top of the present zone carried high pressure water.

The Lost Hills field was considered almost an even bet for production in the Temblor zone, following the discovery of the deep sand at North Belridge, but actual tests have placed a doubtful stamp on the deep zone.

Los Angeles.—Although Long Beach is by far the most active field in the state, drilling work is showing a steady decline. New projects are being started each week, but this is because of the remarkable record held by the field. The larger companies are starting new wells here because they are reasonably assured of a fair production, while the smaller operators are able to finance their projects because of the field record. The wide choice of depths open to the operator makes drilling here somewhat more attractive than in fields having only a thin zone. In the absence of large completions, the Los Cerritos and south and west flank districts have become less active.

New Ventura Avenue Deep Zone Holds Great Promise

Ventura, Calif.—The new deep zone opened in the Ventura Avenue field by Associated Oil Company promises to place a new valuation on inside leases and probably will result in the development of a large production below the former maximum completion depths. The company's Lloyd 57 is coring at 8731 feet and the formation is still running to rich oil sand. Attempts to pull the last core have been unsuccessful, due to gas pressure.

First production at Ventura Avenue was obtained in the shallow zones above 5000 feet. A good production was developed between 4000 and 5000 feet, but a gradual trend toward deeper production was recorded between 1926 and 1929. About the end of 1927, the first well was completed below 7000 feet. This was regarded as a remarkable achievement at the time. Completion depths during the two years following crept downward, but at 8000 feet a slight reaction struck, and operators concentrated on the 6500-7500-foot level.

Recently Associated Oil Company decided to test still greater depths with Lloyd 57. Some doubtful gray sand was found between 7000 and 8000 feet, but at 8100 feet the formation showed no signs of water. Oil in the sand increased gradually, and at 8690 feet the richest core ever pulled from a Ventura Avenue well was taken from Lloyd 57. A thick shale body was found below 8100 feet and the well is in almost ideal condition for running a smaller string of casing.

The present intention is to drill to some point around 9000 feet before running another string of casing. The high gas pressure may make a production test advisable at somewhere near the present depth. A string of nine-inch casing was cemented at 7139 feet, allowing ample leeway for a smaller string. It is not now an uncommon practice to cement large strings of casing at depths greater than that at which wells were completed a few years ago.

Due to lease requirements, Associated Oil Company must develop its holdings by 1942. Should the new deep zone prove to be very productive, the company will be confronted with a steady drilling campaign. Improved drilling practices have reduced the cost of completing wells in this field, and it may be possible to drill to 9000 feet at a total cost not greatly exceeding that of the first 8000-foot completions.

Lloyd 57 is located high enough on structure to insure a new formation from around 8000 feet on to bottom. Completion of this well with a large initial flow would change the value of the field, besides insuring extensive deep development. The Lloyd lease is a large one, however, and offsetting would not be difficult.

Several wells have been drilled to depths greater than that of Lloyd 57, but no one has found rich oil sand at such levels and none has been completed at a depth as great. The Ventura valley fill is very thick and oil sand may be found even below 10,000 feet.

Los Angeles.—The York, Smullin and Olympic interests apparently have a chance to complete a commercial producer on Section 29-4-13, near the east limit of the Torrance field, a successful completion at this point being equivalent to an extension of the producing area and not to the discovery of another field. A small part of this section lies in the Torrance field. The main Torrance structure is a huge, broad nose anticline and extensions are possible, even with a very small production that is free from water. Other tests have been drilled a considerable distance east of the field, but these were definitely too far from the structure.

Expect to Abandon Deep Test Located Near North Belridge

Bakersfield, Calif.—Several unsuccessful tests in Ohio Oil Company's Bloemer 1, a deep test near the North Belridge field, may lead to abandonment of a well which was expected to help in determining the producing limits of the Temblor zone. Like other tests off structure, this well failed to produce at various levels below 5500 feet. The hole was cored to 5986 feet, but preliminary tests were unimpressive. This well was known to have been located outside the producing limits of the shallow zone, but stood a chance at production in the lower sand.

Union Oil Company has not abandoned the idea of making a producer of Belridge 17 at 5541 feet, following failure on a production test. This well was regarded as the next completion in the field and its failure further narrowed the probable producing limits of the Temblor formation.

Belridge Oil Company has shut down four wells and is active in only two. Developments of the past month have removed the necessity of offsetting so extensively. This company's discovery well is flowing at a 4500-barrel rate, having increased its flow gradually from 2800 barrels.

The North Belridge field is not nearly the threat it was six months ago, and the producing zone in the Temblor may prove to be even smaller than that in the upper sand.

Los Angeles.—California's two record wells, one the deepest ever drilled in any field, and another the deepest ever drilled in Ventura County, are apparently little nearer production than they were a week ago. These wells, Shell Oil Company's Williams 1, a test near Semitropic which was drilled to 9702 feet, and Chanslor-Canfield Midway Oil Company's Hobson A2, a wildcat test two miles east of the Rincon field, are interesting from several angles, but both are regarded as doubtful tests in districts which might yield oil from such great depths. Williams 1, the record well, is being swabbed with the hole open to 8925 feet, but is showing only a trace of oil and gas. Hobson A2 is drilling at 9175 feet in brown shale, a formation which holds promise in this district. This well flowed more than 100 barrels on the compressor at 7479 feet, but such a production at this depth was considered barely commercial.

Los Angeles.—Shutting in of upward of 40 producing wells in the Playa del Rey field did not affect drilling wells, since those destined for completion are largely in the hands of operators able to finish the task. The twenty-odd drilling wells are to be finished mostly in the deep zone, since the shallow sand has shown less life in the southeast part of the field than in the townlot district. Reports that an oil sand has been found below the schist are entirely without foundation, but the broken formation is being found deeper than expected in some districts. The field probably will go down in the records as having failed to produce a single outstanding completion. The largest well finished flowed less than 4000 barrels, while the average initial production of all completions was very small. Activity in the townlot district is at a standstill and few wells will be started here.

Los Angeles.—Southern Fuel Company has let the contract for construction of the first section of a 26-inch gas line from Kettleman Hills to Long Beach, California. The first section will extend from a point near Glendale to Long Beach, a distance of 28 miles. This part of the line will largely handle the gas for the southern part of the Los Angeles basin, particularly the Southern California Edison Company plant at Long Beach.

▼ NEW MEXICO - ROCKY MOUNTAIN AREA ▼

Osage Field Completion Sets New Record Output for Area

Osage, Wyo.—Osage Trust Company has reported the completion of one of the best wells in the history of Osage field, Weston County, Wyoming. The well was good for 800 barrels of very high grade crude at 1700 feet. Compared with other fields in the Rocky Mountain region the Osage district ranks among the first in activity. There have been a number of good completions recently and operators are in better position than in other districts. The posted field price is but 50 cents per barrel, but most of the production is being sold to independent refiners at a contract price of $1.05.

Osage Trust Company recently contracted to sell 100,000 barrels of its production to Laurel Oil & Refining Company in Laurel Montana, at $1.05.

Bozeman, Mont.—Pipe line for natural gas which Ohio Oil Company will lay from its holdings in the Dry Creek field, Southern Montana, to this city, is going steadily forward. River crossing at the Yellowstone River is completed, and three more required for the line are under way. Contracts for stringing the pipe already ordered are made, and offices for the company are opened here. Survey inside the city for the distributing system is completed. Entire cost of the project is about $2,500,000.

Casper, Wyo.—Towns of Guernsey and Douglas have granted franchises to furnish natural gas to those communities to North Central Gas Company which plans to bring a supply of gas from Central Wyoming fields to towns in the eastern part of the state and Western Nebraska.

Cheyenne, Wyo.—United States Land Office is advertising for the sale of 55.54 acres of land in the Byron field, Northwestern Wyoming, to take place May 23 in the land office in Cheyenne. Legal description of the leases to be offered are lots 2 and 3 in Section 23-56n-97w.

Casper, Wyo.—Midwest Refining Company, effective April 1, took over the operation of its subsidiary, Utah Oil Refining Company, in the Salt Creek field. It is believed probable that the company may take over the operations of Utah Oil Refining Company in other districts in Wyoming.

Cheyenne, Wyo.—Several departments of the state of Wyoming feel keenly the decrease in income resultant from the drop of about $250,000 in federal and state oil and gas royalties. Included are the state highway department, the department of public education, and the University of Wyoming.

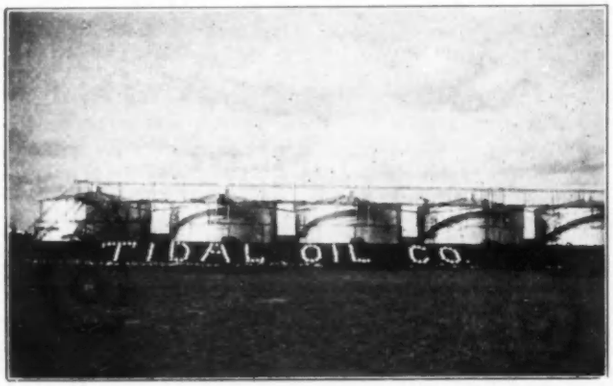
Casper, Wyo.—The Navy Department has authorized the reception of bids for the repair of a number of wells on Teapot Dome, Naval Reserve No. 3, until April 22. Bids are to be opened in the offices of Commander A. A. Baker in Casper on that day. The commander is the inspector of the U. S. Naval petroleum and oil shale reserves of Colorado, Utah, and Wyoming.

Continue Tubing-Curve Gauge of Wells at Hobbs

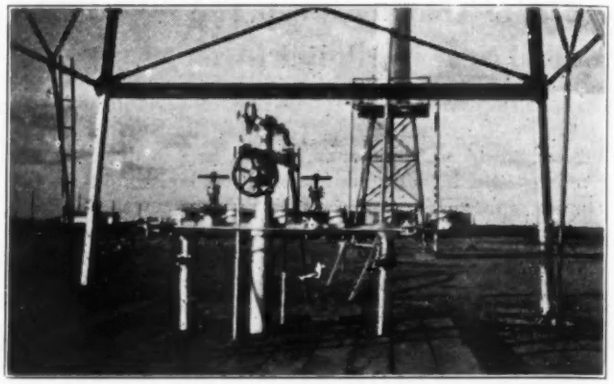
Dallas, Texas.—Operators in the Hobbs field, New Mexico, voiced their confidence in the accuracy of the tubing-curve method of arriving at potential production estimates on wells for proration purposes by voting unanimously to continue the plan from April 15 to the close of the existing proration period, which expires July 10. The meeting was held here April 10, with E. G. Allen, Shell Petroleum Corporation, presiding as chairman of the proration advisory committee. Announcement was made that effective May 1 the allowable production of the Hobbs field would be increased to about 37,500 barrels daily as result of the Shell Petroleum Corporation having increased its nominations from 11,000 to 15,000 barrels daily.

Continuation of the tubing-curve method of gauging wells at Hobbs is the result of an exhaustive study and considerable work carried on in recent months by a special engineering committee, composed of petroleum engineers of the companies owning production in the field. Harvey Hardison, The California Company, is chairman of this engineering committee, which introduced a tubing-curve plan early this year that was given a three months trial beginning January 15 in order to avoid throwing wells wide open, as in the past, to ascertain potentials. W. F. Edwards, engineer for Midwest Refining Company, headed a sub-committee that was appointed to make a study of new methods of taking potentials without opening the wells, while R. E. Watson, engineer for Humble Oil & Refining Company, acted as chairman for a separate committee that was appointed to study the curve and try to make it workable. The combined efforts of the general committee and sub-committees developed a revised tubing-curve method that has proven to be applicable to 90 per cent of the wells in the field, based on actual comparisons with open flow tests. The revised method represents only a few minor changes in the original gauging plan adopted on a three months trial, both involving the flowing of wells through three-inch tubing only.

L. E. Barrows, district manager for The Texas Company, stated that his company was interested in saving gas and retaining rock pressure on the 4000-4200-foot porous lime formation furnishing oil and gas in the Hobbs field, and that every effort should be put forth to retard water encroachment, which is now showing in only three wells on the south and southwest flanks of the field. He added that much credit was due the committee of petroleum engineers for perfecting a method that has been proven to be within two to four degrees of accuracy in determining the maximum flow of 90 per cent of all wells in the field.



Discarded cones from rotary bits plus a coat of paint furnished material for signature of this company on its battery firewall in Hobbs field, New Mexico



Showing type of connections adopted by Tidal Oil Company for its completed wells in the Hobbs field, New Mexico, so as to cut down inventories

Wells that have failed to fall within the tubing-curve "yardstick" have an excessive yield of gas with the oil, or those that will yield more production through tubing only than if flowed through casing, or casing and tubing. Difference in mechanical equipment also accounts for some of the exceptions. These so-called erratic wells are to be tested further, and if found impossible to fit the tubing-curve plan will be allowed to make open flow tests, provided owners request same.

Acting on suggestion made by Mr. Milliken, petroleum engineer for Amerada Petroleum Corporation, Hobbs operators authorized the purchase of a bomb and other necessary equipment for checking bottom hole pressures at intervals in all wells. Milliken stated that his company had been making private tests in the field, and had uncovered low pressure areas through its bomb, which was offered to the operators at cost. Plans are to equip the proration field staff, which is headed by C. G. Staley, umpire, with the necessary instruments for locating the low pressure areas, then adjust gas-oil ratios of wells in such areas to curb the decline in pressure, otherwise water is certain to appear.

W. W. Scott, chief petroleum engineer for Humble Oil & Refining Company, tendered the services of his company in carrying on the study of bottom hole pressure, and commended the movement. It was pointed out that the bomb is inserted into the well through tubing, and that no extra labor or expense is involved in making tests, as members of the umpire's staff are experienced in running the device, and labor assistance can be supplied by each company from their field force.

Casper, Wyo.—The first well ever to be drilled to the Lakota sand in the Big Muddy field, Ohio Oil Company's Jones 5, is flowing at the rate of 355 barrels from a total depth of 4364 feet. It is being tubed with 2½-inch and it is believed that the production may be expected to increase once this work is completed. Well is bottomed 22 feet in the Lakota sand. Oil tests 32 gravity.

Billings, Mont.—The deepest well ever drilled in the Rocky Mountain States, the Northern Pacific Resolute Oil Company's Northern Pacific 1, is now below 8370 feet, nearing the top of the second Wall Creek sand in which production is expected. The location is on the Badger Basin structure, in Park County, Northwestern Wyoming.

Oklahoma--Kansas Field Notes

FLOYD SWINDELL, ***Staff Representative, Tulsa, Oklahoma***

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Tests At Oklahoma City Show Potentials Larger Than Ever

Oklahoma City.—The popular belief that the Oklahoma City pool is rapidly declining and that open-flow for a short time would bring about a radically different picture, is being further disputed through the results of potential tests now being taken. Four hundred and eleven wells gauged prior to Saturday morning, April 11, showed a potential of 4,979,220 barrels on an estimated 24-hour period based on four-hour tests, as compared with a potential of 5,171,789 barrels from all wells in the pool on the January gauges. More than 200 wells remain to be tested, indicating that the total potential will be far in excess of that estimated for the first quarter of 1931, although the pool produced more during that period than at any other time during its history.

As of March 15, 1931, two leases in the pool had produced in excess of 2,500,000 barrels each and seven had passed 1,200,000 barrel mark. Cromwell-Franklin and Indian Territory Illuminating Oil Company's 620-acre Trosper Park lease had yielded 2,873,100 barrels from 32 wells producing from the Arbuckle lime and lower Simpson sands; Wirt Franklin Petroleum Corporation's 100-acre Lowery lease had produced 2,540,250 barrels from 10 wells drawing from the lower Simpson, principally the Johnson sand which directly overlies the Arbuckle lime in this part of the pool; Prairie and Slick's Hiddleston lease comprising 160 acres, produced 1,538,000 barrels from the Arbuckle lime; Coline Oil Company's Olds lease, a 160-acre tract with 10 wells, produced 1,666,300 barrels; Sinclair Oil & Gas Company secured 1,487,000 barrels from its 160-acre Vencl lease and 1,465,300 barrels from its School Land No. 54 lease, a 160-acre tract with 16 wells; Coline Oil Company's Warren, a 160-acre lease with eight wells, had produced 1,212,000 barrels; Mid-Kansas Oil & Gas Company's 80-acre Fortson lease had produced 1,203,000 barrels; and Indian Territory Illuminating Oil Company's Button lease had produced 1,254,500 barrels from 80 acres with five wells. The three Arbuckle lime producers shown above have yielded a total of 3,669,500 barrels from 320 acres or 11,155 barrels per acre. Present conditions of a large per cent of the wells producing from that formation indicate that the production per acre will not exceed 15,000 barrels. However, with a thickness of sand much greater than has been encountered in any other Mid-Continent pool, estimation of ultimate yield from the Wilcox sand is only a hazardous guess, especially in view of the relatively small amount of production that has been taken from it.

The past week was comparatively quiet with no outstanding completions. Interest is centered on the completion of Shaffer and Riddle's Giles 1, NE NE NE SW Section 15-11n-3w, on the extreme west edge of the pool and about two locations west of production. Wilcox sand was topped at 6395 feet and penetrated to a total depth of 6550 feet. Operators hoped to start bailing early in the week but were waiting on the completion of sufficient tankage for the initial four-hour test. It is west of Eason-Oklahoma City Petroleum Company's Lively 1 which recently extended the productive area about three locations westward when it was completed for an initial gauge of 6872 barrels in 4½ hours or at the rate of better than 36,000 barrels for the 24-hour period.

Don Leon Oil Company's Burt 1, NE NW NW NW Section 10-11n-3w, several locations west of production, should be the next completion of interest. Nine-inch casing was cemented at 5400 feet in lime. All other tests now drilling might be classified as inside locations.

Activities in Tatums Pool, Carter County, at Low Ebb

Ardmore, Oklahoma.—Activity in the Tatums pool in northwestern Carter County, was at low ebb when only one well was completed and one location announced during the past week. The Texas Company swabbed 300 barrels of oil during the first 24 hours from its Eaves 6, NE SW SW Section 24-1s-3w, in the southern portion of the pool. Production is coming from sand topped at 2372 feet and penetrated to a total depth of 2481 feet. This completion probably completes the company's activity on the lease since a dry hole was drilled on the 160 acres offsetting it to the south and all other offset requirements have been satisfied with the drilling of five producers and one dry hole on the 80 acres. Carter Oil Company staked location for its J. C. Taylor 1, SW NW NW Section 19-1s-2w, on the east edge of the pool. It is a north offset to the company's Paul Robb 1, a recent completion which made 1500 barrels of oil during the initial 24-hour gauge.

Magnolia Petroleum Company is preparing to plug back to test broken oil sand logged between 1400 and 1500 feet in its L. C. Burton 1, NW SE NW Section 30-1s-2w, one-quarter mile southeast of production in the extension. Earlier in the week it had been announced that the test would be abandoned at 4115 feet but operators decided to test the upper showing before plugging. Carter Oil Company and Louis Sykes are drilling below 1550 feet in their Hopson B-1, NE NW NE Section 25-1s-3w, midway between two dry holes on the south edge of production.

Interest Subsides in Seminole Well as Result of Latest Test

Seminole, Oklahoma.—Interest which centered around Lippa Drilling Company et al's Phillips 1, CSW SW SE Section 8-9n-6e, has subsided since it is now showing for a small producer at 4245 feet in Wilcox sand. One hundred pounds of lead wool were driven on bottom as a cushion for a 20-quart shot which was placed between 4236 to 4244 feet. During the first 16 hours after shooting the well swabbed 220 barrels and in 26 hours had produced 470 barrels with 10 feet of cavings in the hole. At 7:00 a. m., April 13, it had been cleaned out to within a foot of bottom and swabbed 192 barrels in 16 hours. Operators plan to shoot it a second time. R. H. Pierce et al are moving in a rig for their Halsey 1, NWc NE Section 17-9n-6e, south offset to the Phillips well.

Jarvis and Holmes completed their Narcomy 1, CSE NW SW Section 9-7n-8e, approximately four miles west of Holdenville and slightly northeast of the Magnolia-Jackson area which has been yielding some good gas wells in the Gilcrease sand. At 2940 to 2967 feet the well was estimated at 10,000,000 gas and was showing a small amount of oil; deepened to 2971 it

was estimated at about 200 barrels of oil and 15,000,000 gas. It is shut in for erection of tankage.

Mid-Kansas Oil & Gas Company and Ramsey Petroleum Company have what may prove to be a discovery well in their Heitholt 1, CNW SE SE Section 33-24-3w, between the Garber and Tonkawa pools in northeastern Garfield County. Top of the Viola was encountered at 5045 feet and a small showing of oil and water were encountered while coring between 5046 and 5067 feet. The test is located on a large core-drilled block part of which was formerly held by Shell Petroleum Corporation. Nearest production is in the old Billings area which was developed during 1918, 1919 and 1920, obtaining only small production between 2000 and 2100 feet. The test is now shut down awaiting orders.

Magnolia Petroleum Company's Swan Harjo 2, NWc SW SE Section 29-6n-6e, on the south end of the Konawa pool, is shut down at 2910 feet and operators have announced intention to plug and abandon. The same company's Nash-Wood 3, CSW NE SW Section 29-6n-6e, three locations east and one north of the Harjo 2, drilled the plug to 2770 feet and made two flows of five barrels each; it will be drilled deeper. The company's Nash-Wood 2, CSE NE SW Section 29-6n-6e, which was originally completed for a 7000-barrel potential, was opened for the April gauge but would not flow. When cleaned out it established a potential of only 4704 barrels in 24 hours making the potential for the pool 36,194 barrels.

Ritz-Garrett Area's Daily Potential 48,992 Barrels

Wichita, Kansas.—Forty-two wells in the Ritz-Garrett area of McPherson County, have a total daily potential of 48,992 barrels based on new 12-hour gauges taken during the first five days of April. Under the unit plan by which the pools are now being prorated, the potential is 42,351 barrels daily. With the daily pipe line outlet at approximately 6300 barrels, each producer will be allowed approximately 15 per cent of the unit potential. As new wells come in potential gauges are taken and added to the total, a procedure which makes revision of the allowable percentage necessary every few days. Highest potential was from the Texas Company's Munn lease where five wells gauged 7186 barrels. All are producing from the "chat". Shell Petroleum Corporation's Lewis 1, NW NW SE Section 30-19s-1w, south offset to the discovery well, had the highest potential for any single well when it gauged 4092 barrels from the Viola lime horizon.

New work in the area was on a decidedly upward trend when 12 out of a total of 15 locations and new starts for the whole state were in the Ritz-Decker-Garrett pools. A. F. Perry, Lacquement 1, NW NW NE Section 32-19s-1w; C. B. Davis et al's Ritz 2, SW SE SW Section 19-19s-1w; Abilene and Shell's Anderson 2, NE NW NW Section 30-19s-1w; Abilene and Shell's Garrett 1, NW NW NE, Section 30-19s-1w; Wolf Creek Oil Company et al's Dunsford 1, SE SE SW, Section 23-19s-2w; Youker et al's Eaton 1, NW NW NE, Section 26-19s-2w; Syndicate Oil Company and Shell's Becker 2, SW NE SE Section 36-19s-2w; and Syndicate Oil Company and Shell's Becker 3, NW NE SE Section 36-19s-2w, were locations made during the past week. Abilene Oil Company and Shell Petroleum Corporation are digging cellar and pits for their Anderson 1, NE NE NW Section 30-19s-1w, third location north and one west of the discovery well. Data now available indicate that the Viola lime structure will not coincide with the "chat" but with a relatively small number of wells completed in the lower zone it is impossible to determine the exact structural condition. Three of the new locations are in Section 30-19s-1w, the Garrett pool, where the four original wells found small amounts of oil and water in the "chat," a condition which indicates that all future wells will be drilled to the Viola lime horizon.

Stearns and Streeter et al are considering another shot in their Blair 1, NW NW NW Section 32-19s-2w. A 40-quart shot was made in the Viola lime horizon between 3445 and 3455 feet resulting in an estimated flow of approximately 400 barrels. Seven wells have top of the "chat" and should be completed within the next week. Madison and Shell are running 6⅝-inch casing to the top of the "chat" at 2914 feet in their Hale 1, SE SE NE Section 24-19s-2w. Wolf Creek Oil Company et al topped the "chat" at 2922 feet and are running 8¼-inch casing in their Lacquement 1, NW NW SE Section 20-19s-1w.

Blackwell Petroleum Company et al expect to reach the "chat" within a few days in their Rounds 1, NEc Section 17-27s-2e, approximately one mile northeast of production in the Eastborough pool in eastern Sedgwick County. The test is located in the same half-section in which Lario Oil & Gas Company completed its Rounds 1, SW SW SE Section 17-27s-2e, several months ago. It was a dry hole at 3305 feet, approximately 400 feet below the point at which "chat" production was expected. A northeast-southwest line projected through the pool passes within a short distance of the dry hole indicating that the Blackwell test may be structurally low.

Blakesley, Wentz and Skaer encountered a showing of gas estimated at 20,000,000 cubic feet at a total depth of 1600 feet in their Anderson Holliday 1, CSL SW NE Section 24-27s-4e, on the northeast end of the Augusta pool in Butler County. No appreciable amount of gas was expected at this depth and the well went out of control, intermittenly tying up traffic on the Frisco railroad depending upon direction of the wind. Several trains have passed the well, which is located only about 100 feet from the tracks, by cutting out fires and coasting for a safe distance on each side of the gas area.

Find Two New Pools, Stray Gas Sand in Western Kansas

Wichita, Kansas.—Two new pools, a favorable showing in a wildcat test in the western part of the state, and a gas well blowing wild from a stray sand is the record established in Kansas during the past 10 days. L. E. Cress et al's Sharpe 1, CSE SE NE Section 13-20s-10w, approximately three miles northeast of the Schurr-Raymond pool in western Rice County, was deepened 2½ feet to 3338½ feet in "siliceous lime" where it filled 1000 feet in 15 minutes and made a 45-minute flow of oil testing 49.2 degrees A.P.I. at 68 degrees Fahrenheit. The first show of oil came when six feet in the lime at 3336 feet, but the hole was in bad shape and had to be cleaned out. J. A. Aylward et al's Stratman 1, SE NW SE Section 1-17s-10w, in southwestern Ellsworth County and about 20 miles north of the Sharpe well, was deepened from 3255 to 3266 feet where it produced 57 barrels of oil the first hour. Deepened an additional five feet to 3271 feet, it flowed 90 barrels the first hour and 127 barrels the second. Both wells are being variously estimated at 2000 to 5000 barrels initially.

Gypsy Oil Company encountered a crystalline lime at 4353 feet and had 350 feet of oil in the hole in its Coleman 1, CSW NE Section 25-17s-25w, wildcat test in western Ness County. Drilling was carried to 4418 feet with no increase in oil and about 700 feet of water from the last 18 feet. First oil was encountered at 4374 feet and no water was showing until the lime had been drilled to 4400 feet. At this point water came up about 300 feet and gradually increased until the total depth of 4418 feet was reached. Definite correlation cannot be made at this time but those who have followed the well closely believe that the crystalline lime is in the Pennsylvania System probably near the base.

East Central Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

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Salt Water Makes Appearance On West Edge of Kilgore Area

Tyler, Texas.—Hot salt water made its appearance in the spectacular East Texas oil producing area for the first time on April 10 when two big producers on the west edge of the Kilgore field showed about 25 per cent cut oil each, and failed to check the water encroachment when throttled to several hundred barrels daily. Feverish condition of the oil yielded by wells exposed to heavy flow has been observed with great interest by operators for several months in the Kilgore and Longview fields, and the arrival of water troubles was anticipated earlier, as high temperature has proven in the past to be an unfailing warning of the rise of the water table in Woodbine sand areas. Experienced operators are not alarmed over the sudden turn of developments, and are taking prompt steps to handle the situation as the inevitable spread of the water intrusion takes place, while the practice of drilling through the oil sand will be checked when the total depth extends to the now established water level.

Magnolia Petroleum Company and C. P. Burton Drilling Company et al's offset producers on the E. B. S. Florey farm, located against the east edge of the Peter Holmes Survey, Rusk County, were the first of more than 200 completed wells in the district to experience water troubles. Magnolia Petroleum Company's Florey 1 was completed on the morning of April 10, gauging 780 barrels of pipe line oil per hour on open-flow from 20 feet of Woodbine sand, which was topped at 3647 feet. This well registered hot oil from the start, having been officially credited with being 127 degrees on the first hour flow. Placing of the well on steady flow later in the day brought on the bottom hole water, and the percentage of cut oil promptly jumped to about 26 per cent. Burton et al's offset has been completed since March 15, but has sustained very little oil drainage because of inability to get market relief until recently when the company erected its own rack and line. The depth of the Burton well is placed at 3729 feet, but this figure is generally discounted as being the actual vertical depth because of conditions under which the well was drilled and completed.

Nearly 100 per cent water flowed from Magnolia Petroleum Company's Florey 1 when the well was thrown open for a brief period on the morning of April 14, after having been pinched to about 75 barrels overnight with 23 per cent cut oil. Representatives of the company announced that the well would be killed and the hole cemented below the casing point, then redrill only a few feet into the sand to try and cut down the water trouble.

Conversion of the Florey producer into a water well without any appreciable oil drainage indicates that it will be a natural condition for the water to travel rapidly and with deadly effect on the flowing life on wells in the two north areas, where oil temperatures ranging from 100 to 140 degrees are now quite common on wells exposed to heavy oil withdrawals. The main section of the Joiner field is apparently more secure from water as the oil is not registering high temperature.

Prior to the water intrusion on the Florey tract operators were using the recently completed failure of Tips DeArmand et al on the Chas. Cobb farm, located in southeast Upshur County and apparently on the northwest edge of the Longview field as a guide to the expected water table. Cobb 1 found water in top of Woodbine at 3777 feet, or 3349 feet below sea-level. Magnolia Petroleum Company's Florey 1 was drilled about 3326 feet below sea level.

Assuming that the water level is somewhere near constant on the west side of the producing area, except when the area is exposed to coning and channelling by unusually heavy oil withdrawals, it is now reasonable to expect that wells drilled from 3300 to 3350 feet sub-sea will be exposed to more rapid water encroachment. A number of wells have been carried below this approximate deadline, as illustrated by the detailed table on all completed wells published on page 72 of the April 10, 1931, issue of THE OIL WEEKLY for the Kilgore and Longview fields. Operators in the Van field have learned through actual experience that a sub-sea depth of 2450 feet is the safety line on bottom hole water, although wells are drilled 50 and more feet without making water. A similar water level rule held good on the various fields comprising the Mexia-Corsicana district.

Dispensors of treating compounds and equipment for using same are in line to enjoy a good market for their products in East Texas during the remainder of the life of the production. Rigid enforcement of proration will not prevent water entrusion after it has once made its appearance, although it will serve to retard the spread of water with fairly equal oil withdrawals taking place, and all wells restricted to small chokes. It is quite probable that a movement will be launched shortly by operators for the installation of jointly owned salt water disposal plants, thereby reducing the general cost of handling water, and also cutting down damage suits.

Western Wells at Joiner and Longview Watched for Water

Houston.—The first salt water in the producing area of the new East Texas oil field, making its appearance in two wells on the west edge of the Kilgore area, not only marks the western boundary of the Kilgore pool but also gives rise to speculation as to whether or not water may also be expected shortly in western outpost producing wells of the Longview and Joiner areas or in new wells which may be completed still farther west.

Two wells which will be watched with particular interest, consequently, are Guy V. Lewis et al's S. S. Cook 1, in the edge of Smith County, five miles west of most easterly production in the Joiner pool, and Selby Oil & Gas Company's P. J. Snavely 1, near Gladewater and five miles west of most easterly production in the Longview pool. The former came in as a 12,000-barrel well March 30, 1931, and was subsequently pinched to 1000 barrels daily, and the well near Gladewater was also rated as a 12,000-barrel producer when completed a little over a week ago.

The two Kilgore field wells which began showing water early

this week are Magnolia Petroleum Company's Florey 1, P. W. Holmes Survey, and the north offset to it, Burton Drilling Company's Florey 1. They were west extension wells giving Kilgore pool a maximum width of about three miles. The Magnolia well came in April 10, 1931, flowing 198 barrels in 15 minutes, and later that day, flowing at the rate of 185 barrels daily through 2/64-inch choke, showed 24 per cent b.s. and salt water. The Burton well, which had been completed March 15, was shut in on April 13, not having pipe line connection, but sample taken from separator was badly cut and showed 53 per cent b.s. and salt water. The well had produced an average of 167 barrels daily during week ending April 8.

Study of the accompanying table reveals that Magnolia Petroleum Company well, Florey 1, which is now making salt water, found the top of the oil sand 100 feet lower (below sea level) than it was logged in Heep Oil Company's Bean 1 in the easternmost part of the field, and bottom of the hole in the Magnolia well is 121 feet below top of the sand in the Heep well. In other words, the Magnolia well reveals that in the Kilgore area salt water has made its appearance at a point not more than 121 feet down dip, and any wells in the Kilgore pool drilling to similar depths below sea level (between 3300 and 3350 feet sub-sea) may logically be expected to show water.

The accompanying data shows considerable difference between formation tops in Burton Drilling Company's Florey 1 and Magnolia Petroleum Company's Florey 1, although they offset each other directly north and south. It is figured that the Burton well may have a crooked hole.

Dip Abrupt At Kilgore

In the Joiner and Longview areas the dip of the producing sand is not so abrupt as at Kilgore, and even though those fields have each attained width of about five miles as against three miles for Kilgore, they have not yet spread far enough west for the sand to be found sufficiently low to carry salt water at present.

On the west edge of the Joiner pool, where that pool is five miles wide, the Guy V. Lewis producer in the edge of Smith County topped the producing sand at 3256 feet sub-sea and drilled to 3277 feet sub-sea. The bottom of the hole is 153 feet lower (below sea level) than the top of the sand in George S. Anderson et al's Frederick 1, one of the most easterly producers in the field.

In the Longview pool there is some confusion as to dip of the sand. The most westerly producer is Selby Oil & Gas Company's Snavely 1, which logged two separate oil sands. This well recently gave this pool maximum east-west extent of five miles, measuring from Frank Foster-East Texas Refining Company's Jasper Rodden 1, a producer in extreme eastern part of the field. Bottom of first sand in the Selby well is at 3261 feet sub-sea, or 144 feet lower (below sea-level) than top of sand in Jasper Rodden 1, and the bottom of the hole is at 3310 feet sub-sea, or 183 feet lower than top of sand in Jasper Rodden 1.

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Elevation	273	428	333
Bottom of hole (sub-sea)	3310	3436	3209
Top of sand (sub-sea)	3255 1st sand 3299 2nd sand	3349	3117
Bottom of producing horizon	3261 1st sand 3310 2nd sand	3414	3201

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Elevation	330	354	400	418
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Joiner (Henderson Area)

	(West Side) Lewis et al's Cook 1	(West Cent'l) Demontrand's Birdwell 1 (2½ mi e Lewis-Cook)	(East Cent'l) Foster-Deed Rock's Ashby 1 (4½ mi e Lewis-Cook 1	(East Side) Anderson's Frederick 1 (5 mi e Lewis-Cook)
Total depth	3696	3620	3616	3590
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Austin, Texas.—Plans to enforce proration in East Texas within this week are being drawn up by the railroad commission, following the opinion of Fred Upchurch, assistant attorney general, to the effect that the injunction recently granted to former Governor Dan Moody and Carl Estes is applicable only to an area comprising 72 acres. Mr. Upchurch pointed out that Judge J. D. Moore, of the 90th district court, would not and did not intend to grant an injunction to parties not having made application for such injunction, and that there are many parties in Rusk, Gregg and Smith Counties who favor proration of the East Texas area. His conclusion, therefore, was in effect that it would be no violation of the injunction if the commission proceeded to prorate other leases.

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from the field should be 100,000 barrels, then such unit would participate in the 25,000 barrels daily outlet in the ratio of 5000 to 100,000, or 1/20.

Name Advisory Committees

Proration advisory committees were appointed for each of the three areas during meeting of operators held April 11 at Longview and Henderson. Because of the proration injunction being in effect on that day in broad terms these committees were then supposed to confine their efforts to giving assistance to the railroad commission in adjusting transportation outlets equally among producers, and arrange for market relief for wells not yet served by lines. The three committees follow:

Longview field: W. L. Todd, vice-president, Simms Oil Company, Dallas; Chas. F. Roeser, president, Roeser-Pendleton, Inc., Fort Worth; C. H. Pape, head land department, Selby Oil & Gas Company, Tulsa; T. F. Rothwell, vice-president, Yount-Lee Oil Company, Beaumont; and H. R. Dickerson, general superintendent, Arkansas Fuel Oil Company, Shreveport.

Kilgore field: J. S. Bridwell, Federated Oil Company, Wichita Falls; John W. Olvey, El Dorado; J. R. Parten, president, Woodley Petroleum Company, Shreveport; C. H. Hardison, drilling superintendent, Houston Oil Company, Houston; and John R. Suman, director, Humble Oil & Refining Company, Houston.

Joiner field: W. B. Hamilton, Wichita Falls; Jack Roberts, president, Roberts Oil Corporation, Breckenridge; Glenn Harroun, production superintendent, Sinclair Oil & Gas Company, Oklahoma City; Sam Gladney, Sun Oil Company, Dallas; J. E. Fitzpatrick, vice-president, Deep Rock Oil Company, Fort Worth; F. W. Merrick, secretary-treasurer, Ward Oil Corporation, Ardmore; and Gillette Hill, vice-president, Moody-Seagraves Producing Company, Houston.

Shell Trying to Dispose of Gregg-Rusk Counties Leases

Tyler, Texas.—Shell Petroleum Corporation is making a strenuous effort to dispose of a large percentage of its numerous leases located in proven sections of Gregg and Rusk Counties, and during the past week consummated a deal with Yount-Lee Oil Company, Beaumont, that netted the latter a completed oil well and about 600 acres of proven leases in the original section of the Longview field. The consideration involved was not made public, but the transaction will enable the purchaser to avoid drilling more than a dozen tests by reason of having adjoining tracts that would have otherwise required offsets.

Since Shell Petroleum Corporation acquired its East Texas leases prior to the high priced period, it is reported that the above deal virtually returned the company's investment. Yount-Lee Oil Company took possession of Shell Petroleum Corporation's completed well on the J. D. Davis 40-acre lease, Wm. Robinson Survey, 7 a. m., April 8. This well was completed April 1, making 200 barrels hourly through 2½-inch tubing from sand at 3596-3606 feet, followed by shale at 3606-3630 feet. The combination four and six-inch pipe line, extending from the Davis property to a 30-car rack at Camps, was not included in the sale made by Shell Petroleum Corporation, although a separate deal may be made later.

Negotiations are under way for Shell Petroleum Corporation to make separate deals on its remaining Gregg County acreage lying north of the Sabine River; in the Kilgore field; and also in the Joiner field. The company turned its recently acquired tank car rack site on the Laird farm, M. V. Winkle Survey, Kilgore field, to Sun Oil Company last week.

East Texas production does not tie into the set-up of Shell Petroleum Corporation, as heavy investments have been made in recent years in the construction of separate 10-inch trunk lines from West Texas to the Middle West and also to the Gulf Coast. These investments would necessarily go on the inactive list should the company shift to East Texas for its domestic crude supply, while such a shift would require more pipe line work, or use of tank cars.

Rusk-Gregg Field Operations Show Heavy Increase for Week

Tyler, Texas.—Field operations in the Rusk-Gregg County district scored a heavy gain during the past week on the strength of a brief threat that proration enforcement would be forestalled by court action for an indefinite period, and on April 13 the two counties were credited with 417 operations, exclusive of completed wells. One week previous the district had 389 operations listed, and an increase of 28 was attained even though 50 completions, including three failures, were recorded during the same period. During the week previous there were 55 completions, including five dry holes. All failures being located on the east flank of the oil producing area in the two counties.

Rusk and Gregg Counties have more than 200 completed oil wells at present, and indications are that the number will be near the 500 mark by the middle of the year, with assurances that the latter figure will be doubled prior to the close of the year. The majority of the operators will attempt to place as many 20 and 40-acre units on production as soon as possible in order to obtain a reasonable share in the allowable production quota assigned to each of the three sectors designated by the Texas Railroad Commission's proration order of April 4.

Expansion of field work in Rusk and Gregg Counties during the past eight weeks is illustrated by the table below, showing operations on given dates:

Date	Locations	Derricks and Rigs	Active Tests	Total
February 23	23	71	70	164
March 2	22	97	84	203
March 9	21	129	104	254
March 16	21	128	136	285
March 23	27	136	194	357
March 30	22	141	222	385
April 6	24	134	231	389
April 13	40	154	223	417

Big Wells Predominate in East Texas Completions

Tyler, Texas.—Big wells predominated in the large number of successful completions made in the Rusk-Gregg County district during the past week, with a shrinkage in potential oil production area taking place as result of first water appearing on the west side of the Kilgore field and drowning out the oil flow completely in one well. Drilling on the west flank of the long stretch of continuous producing territory is to be more moderate now that the water level has been established, and west side leases are to be the first to suffer as the water level rises.

Sultan Oil Company, Tulsa, widened the Longview field to the northwest a short distance early last week by completing Thrasher 1, G. W. Hopper Survey, with an initial flow of 1750 barrels of oil during first two hours from sand at 3533 to 3564 feet. Details were published last week about

(*Continued on page 79*)

Field Operations in New East Texas Area

RUSK COUNTY OPERATIONS

Operator—	Locations	Derricks & Rigs	Active Tests	Total
J. S. Abercrombie et al		1		1
Geo. S. Anderson & Cox			1	1
W. D. Andy Anderson et al			2	2
C. Andrade-Imperator Oil Corp.		1		1
Pat Armstrong & Pitts		1		1
Babcock-Gordon Oil Co.	1		1	2
Ball Oil Corp. & Malone				
Nick Barbare (U.O.G.&M.)	1			1
Beard & Hammond	1		1	2
Bill & Dave Oil Corp.			1	1
Big Indian Oil & Dev. Co.		1	1	2
H. L. Blackstock et al			1	1
British American Oil Co.		1	3	4
Dan S. Brooks, Trustee			1	1
Burton Drlg. Co.	4		2	6
Carolyn Oil Corp.	1			1
Roy I. Carter	1	1	2	4
E. L. Chapman et al			1	1
Cordova Union Oil Corp. et al		1	3	4
Crabtree-Rowe-Johnson			1	1
Cranfill-Reynolds Co.		2	2	4
Carl G. Cromwell et al		1		1
J. G. Curtis & Lowe			1	1
M. A. Crum et al	1			1
Danciger Oil & Ref. Co.	1		3	4
Geo. DeMontrand-Geo. B. Ray	1			1
Dohman et al			1	1
W. H. Dunning, Jr.			1	1
W. H. Dunning & J. H. Markham, Jr.		1	1	2
East Texas Ref. Co.		2	1	3
Harry W. Elliott et al			2	2
Elzey Drlg. Co. & C. H. Tautenhahn		1		1
Geo. Fagg et al			1	1
Federated Oil Co.	2		3	5
Fitzimmons & Thomason		1	1	2
Frank Foster-Deep Rock et al		1	2	3
Foster-Little et al			1	1
Fox-Butler & Heflin			1	1
Gibson & Johnson & Merrick Drlg. Co.			1	1
Gilcrease Oil Co.			3	3
R. W. Giles (Shreveport Prod. Co.)			1	1
Dudley S. Golding-T. B. Cochran	1			1
A. M. Griffith et al			1	1
Gulf Coast Oil Co.		2	1	3
Gulf Production Co.		8	4	12
Gulf Prod. Co.-Devonian Oil Co.			2	2
W. B. Hamilton-Consolidated Oil Co. et al		1	4	5
L. P. "Pink" Hammond et al		1		1
Haynes Drilling Co.			1	1
Heep Oil Co. & Houston Oil Co.			1	1
Heep Oil Corp. & Imperator Oil Corp.		1		1
Hicks Drilling Co.			1	1
Hill & Jack Younger		1		1
John W. Hoosier et al			1	1
Horseshoe Synd. (was W. B. Pierce)			1	1
Humble O&R Co.	5	10	9	24
Houston Oil Co.		1	6	7
Houston Prod. Co.		1		1
H. L. Hunt et al			2	2
H. L. Hunt & Grady H. Vaughn			1	1
N. W. Hunter et al		1	1	2
A. R. Irvin et al		1		1
Johnson et al			1	1
C. M. Joiner (E. R. Tennant, Rec.)			3	3
Ed. M. Jones et al		1	1	2
Ed. M. Jones-Houston Oil			3	3
K&M Oil Co.		2		2
K. & P. Oil Co.			1	1
Karona Oil Co. (Heard)		2		2
J. S. Kimbrough et al			1	1
LaSalle & Davenport		1		1
Killerman & Hines		1		1
Killam & Reed		1		1
E. C. Laster, Inc.			1	1
E. C. Laster, Inc. & Miller		1		1
Louisiana-Texas Oil Corp. & Lyons			1	1
Lewis Prod. Co.			1	1
Lewis Prod. Co. & Selby O&G Co.		1	1	2
Lide-Taylor Oil Co.		1	1	2
Lide-Rowe Oil Co.			1	1
Lively & Bryan			1	1
Pete Lively et al			1	1
Luling Oil & Gas Co.			2	2
John F. Mabee, Inc.		1	1	2
E. B. Madden et al			1	1
Magnolia Pet. Co.		4	5	9
Marine Corp. et al	1		1	2
Chas. McDonald-Merrick Drlg. Co.			1	1
C. L. McMahon et al		1	2	3
McMann et al		1	1	2
McIntyre Drilling Co.			1	1
McMillan et al			1	1
Merrick Drlg. Co. et al			1	1
Mid-Kansas O&G Co.		1	1	2
G. B. Mitchell et al		1		1
Morefield Drlg. Co.-B. T. Head			1	1
Moody-Seagraves Interests	1	5	4	10
H. S. Moss & Pete Urschel			2	2
Moss et al			1	1
Navarro Oil Co.		1		1
Navarro Oil Co. & H. L. Brown & Hill		1	1	2
H. E. Oliver-F. H. Brown & Republic			1	1
Olson Bros. et al		1	2	3
John W. Olvey & Sample		1		1
Pace et al		1		1
Pearl Oil Co (Vitek)		1	1	2
Peery-Woody & C. W. Boller		1	1	2
Petroleum Marketing Corp.			2	2
Phares & Sample			1	1
A. W. Phillips Oil Operators	1	1	1	3
Pilot Oil Co. (Tom E. Cranfill)		1	2	3
Geo. B. Ray et al		1		1
Republic Prod. Co.-Louis Hart			1	1
Robert Oil Corp. et al			1	1
Frank W. Roe		1		1
Robertson Drilling Co.			1	1
Roeser-Pendleton, Inc.			1	1
J. S. Rushing et al			1	1
Rusk County Oil Co.		1		1
Nat Sadler et al			1	1
T. G. Shaw Interests		1		1
Bert J. Shaw Oil Co. et al			1	1
Shell Pet. Corp.	1		1	2
Shubert (East Texas Loan & Dev. Co.)			1	1
Sinclair O&G Co.		1		1
H. R. Smith-Gulf Prod. Co.		3	1	4
Snetcher & Pitman	1			1
Stanolind O&G Co.			3	3
H. R. Smith-Houston Oil Co.			2	2
Stokes et al			1	1
Snowden & McSweeney Co.			2	2
Southern Oil Co.		1	1	2
Sun Oil Co.		4	3	7
Texas Inland O&G Co.(Merrick Drl. Co.)			1	1
Texas Trading Co.			1	1
G. O. Thompson et al		1		1
Tidal Oil Co.		4	1	5
Tulsa Oil Co.			1	1
Turman Oil Co.	1	1	2	4
Turner & Swift	1			1
C. E. Upchurch & Allen		1	1	2
W. D. Walton et al			1	1
Ward Oil Corp.		1	2	3
Ward Oil Corp.-Elliott-Johnson			1	1
Weaver-Crim Corp.		1	1	2
Westexas-Oil & Roy. Corp.			1	1
Westheimer-Daube-Cox & Hamon		1	1	2
Woodley Petroleum Co.		1	4	5
Total	27	103	180	310
Total Previous Week	15	86	189	290

GREGG COUNTY OPERATIONS

Operator—	Locations	Derricks & Rigs	Active Tests	Total
W. M. Angle & Brytex Oil		1		1
J. L. Anderson et al		1		1
Arkansas Fuel Oil Co.	1		1	2
Arkansas-Yount Lee Oil Co.	1		1	1
P. P. Ash et al		1		1
Beeler & Beeler		1		1
Blackwell Oil Co.			1	1
Claude Bell & R. A. Graddy			1	1
Bert L. Brookins et al		1		1
D. H. Byrd-Gulf-Humble et al		1		1
Earl P. Carley & Blair	1			1
Cranfill-Reynolds Co.		1	1	2
Crump & Hanagan	1		1	2
Daisy Oil & Gas Co.			1	1
Danciger Oil & Ref. Co.	1		1	2
Davis & Russell			1	1
Daniel & Tom. C. Patton			1	1
Tom David		1		1
Joe DeGlazier et al		1		1
Harry W. Elliott et al		1		1
E. E. Eslick & Little			2	2
F. H. E. Oil Co.		1		1
Flanagan Prod. Co.		1		1
L. S. Flannery et al		1		1
R. L. Foree-Shasta Oil Co.		1		1
Frank Foster-East Texas Refg. Co.		1		1
Frank Foster & Rhodes		1		1
A. N. Gibson & Adams	1		1	2
Heep Oil Corp.-Houston Oil			1	1
Herden & Woodard		1		1
Ed. B. Hopkins & A. R. Byrd, Jr.			1	1
Houston Oil Co.		1		1
Pat Hudson & Geo. McCamey		1		1
T. D. Humphreys et al			1	1
Humble Oil & Ref. Co.		1		1
S. F. Hurlburt & Brown			1	1
Hunter-Rowe et al			1	1
C. C. Julian Oil & Royalty			1	1
Kilgore-Central Oil Co.		1		1
H. P. Key et al		1		1
Kinsey & Trimble		1		1
Marlan Oil Synd.			1	1
Mazda Oil Corp.		1		1
Mid-Kansas O&G Co.		3		3
Magnolia Pet. Co.		1	3	4
Meek & King		1		1
McMillan Pet. Co.			1	1
H. S. Moss et al			1	1
Norton & Holmes		1		1
John W. Olvey et al		1		1
Oriental Oil Co.	1		1	2
Pace et al		1		1
Pace Pet. Corp.		1		1
Phares & Sample		1		1
Phillips et al		1		1
Primrose Ref. Co.-Penn-Worth Oil Prod. Co.			1	1
Pilot Oil Co.			1	1
Republic Prod. Co.	1		1	2
C. Rosenfield (Rose Oil Corp.)			1	1
Roeser & Pendleton, Inc. et al			1	1
Robert et al		1		1
Jim Rush (Trinity Drl. Co.)		1		1
Selby Oil & Gas Co.		1		1
Shell Petroleum Corpn.		1	1	2
Sinclair Oil & G. Co.		1		1
Skipper Oil Co. & Lacey			2	2
J. R. Smith et al		1		1
Stanolind O&G Co.-Simms	2		1	3
Sutton & Daniels		1	1	2
Sultan Oil Co.		1		1
Sultan Oil Co. & McDaniel		1		1
Sutton et al		1		1
Texas Unity Oil Co.	2	1	1	4
Sam K. Vierson et al		1		1
Paul Vitek et al			1	1
Whittle & Kavanaugh			1	1
W. L. Wollett			1	1
J. A. Wier, et al		1		1
K. Z. Werby & McMinn et al			1	1
Pat J. White et al			1	1
Wise & Jackson	1	1		2
Yount-Lee Oil Co.		1	3	4
Total	13	51	43	107
Total Previous Week	9	48	42	99
Total Both Counties	40	154	223	417
Total Previous Week Both Counties	24	134	231	389

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

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Barbers Hill Is Active With Three Completions for Week

Houston.—Despite a general continued decline in drilling operations and completions in the Gulf Coast the Barbers Hill field has steadily maintained its production with at least one or two completions each week. During the past week its potential production was boosted 6450 barrels with completion of three new producers and one work-over well. A fifth completion was marked up as a failure, Sun Oil Company's McKinney Fee 4, having been abandoned in shale at 6477 feet.

The largest completion was that of the Humphreys Corporation, Lula Barber 1, on the south side of the field, which came in for an initial flow of 3100 barrels from a total depth of 5572 feet. The well was brought in flowing through five-eighths inch choke with pressure of 575 pounds after four joints of 6⅝-inch screen had been set. Sun Oil Company's Chambers County Agricultural Association 8 on the southeast side of the dome was completed for 800 barrels of 29 degree gravity oil at 4521 feet. Pressure of the well was 165 pounds per square inch.

The second largest well completed in the field during the week was Humphreys Corporation's E. W. Barber 2-B, also on the northeast flank of the field, which was brought in for 1850 barrels from 5079 feet. The well is flowing through two one-half-inch chokes with pressure of the well registering 330 pounds. Gravity of the oil in this producer is 30.4 degrees. Gulf Production Company's Wilburn 4, on the east side of the field was completed after having been work-over for a total of 700 barrels daily at 5239 feet. The well showed 10 per cent of the fluid to be water. Production was allowed to flow through one three-quarter-inch choke and one three-eighths-inch choke.

Completion of the two wells by Humphreys Corporation further proves large initial production on the north side of the field and also traces the over-hang of the dome farther around the dome toward the northwest side. The E. W. Barber 2-B drilled through 1850 feet of salt, top of the salt was hit at 1389 feet and bottom of the salt was found at 3239 feet.

Activity Is Reduced Along Gulf Coast of Louisiana

Houston.—Active operations in the Louisiana Gulf Coast during the past week reflect the general let-up in drilling operations experienced within the past three months. Two completions were registered for the entire area and both of these were wildcat wells that had been abandoned. The two wells that were abandoned were Convent Oil Company's Jacobs 1 in St. James Parish and Louisiana Gas & Fuel Company's Minor Estate 1, in Terrebonne Parish.

The only favorable indications for completions during the coming week have been found in Union Sulphur Company's Fee 766, in the Sulphur field, which tested an oil sand at 4202 feet after screen had been set at that depth. Gulf Refining Company has plugged its United Land Company 19 in the Sorrento field back to 4350 feet and is testing the sand at that level.

Union Sulphur Company is drilling in salt at 7049 feet in Fee 762 in the Sulphur field, and will probably be forced to abandon that test. Kelso Bayou 37, 38, and 39 of Yount-Lee Oil Company at East Hackberry, have been temporarily abandoned and will likely be abandoned completely. Yount-Lee Oil Company has three other locations in the East Hackberry field that have not been operating within the past five months.

The possibilities of further operations have been diminished since no new locations have been during the past two weeks and no permits were issued for the past week.

Activity at Raccoon Bend Now Reduced to a Minimum

Houston. — Operations in the Raccoon Bend field have been reduced to a minimum with the completion last week of Humble Oil & Refining Company's Paine 12. This well was completed for an initial production of 200 barrels daily from total depth of 3555 feet. Casing was set at that depth with 250 feet of screen set on the bottom of the hole.

The only operation left in the field is Remmert 1 of Humble Oil & Refining Company which is an offset to H. R. Flannigan's Deutrich 1. Deutrich 1 was completed the latter part of January of this year as a gas well with an estimated flow of 30 million cubic feet of gas daily from 975 feet. Remmert 1 is still a location and will probably not be drilled for some time.

Two Producers Completed At Pierce Junction Dome

Houston.—Activities and completions on the northwest side of the field at Pierce Junction continue to increase the limits of the field. Warner-Quinlan Company's Minchen 2, which was completed during the past week for initial production of 600 barrels, gave the production of the field a considerable boost and extended the productive area 134 feet west of its Minchen 1. The latter well was completed last October for initial production of 400 barrels at the 4100-foot level.

Minchen 2 was brought in at 4486 feet making 600 barrels of 30 gravity oil and is flowing through one-half inch choke. Temperature of the oil is 70 degrees Fahrenheit. Two joints of screen were set on the bottom of the hole.

Rio Bravo Oil Company is rigging up Settegast 21-A, in the same field, and has made location for Westheimer 1. The new location is 100 feet north of the south line and 800 feet west of the east line of Block eight, lot one, of the John Jones Survey. Tilton & Perot's Gulf Jones Fee 1, located in the Jones 50-acre tract is drilling in sand at 3700 feet.

Houston.—The Gulf Coast chapter of the Petroleum Safety Council will meet at the Rice Hotel May 8 at 12 o'clock noon in conjunction with the annual meeting of the southwestern regional conference of the National Safety Council, that regional meeting representing states of Texas, New Mexico, Louisiana, Arkansas, Oklahoma and Mississippi.

Deep Test Is Abandoned in Southern Louisiana Field

Houston.—Louisiana Gas & Fuel Company in making a further attempt to locate production in the Houma field has been forced to abandon Minor Estate 1 at 6500 feet in shale. The well, which is located 6407 feet north, 73 degrees west and 950 feet north, 16 degrees east of the southeast corner of Section 102-17s-17e, was started about the first of October, 1930.

This test in Terrebonne Parish was located on the strength of gas seepages which lead to the discovery of the gas production. Work in that area has shown that no dome exists. Efforts were made by Charles Paggi Drilling Company to find production in the field last year in his Evergreen 2 but that test was also abandoned in January, 1931, at total depth of 1800 feet without having encountered any favorable showings in the well.

Activity Centers on West Side of Moss Bluff Dome

Houston.—The west side of the dome at Moss Bluff is experiencing the greater part of the activity in that area with Humble Oil & Refining Company and Texas Gulf Sulphur Company operating a majority of the tests. Sterling 7 of Humble Oil & Refining Company was completed last week for initial production of 550 barrels at 5855 feet. The oil was flowing through three-eighths-inch choke registering 280 pounds pressure. This well is located on the southeast flank of the dome.

The same company is attempting to hit deeper sand on the northwest side of the dome in Breeden 2, which is now drilling in shale at 6470 feet. Texas Gulf Sulphur Company's M. P. Munger 1, also on the west side of the dome, has been abandoned in cap rock at 1107 feet. Cowan 1, a recent location of the same company, is now drilling at 825 feet in sand. Two new locations have been made by this company, Carter 4, which is situated 100 feet out of the northeast corner of a 60-acre tract in the B. M. Spink Survey, and R. H. Munger 1, which is located 100 feet out of the northeast corner of the 27-acre tract in the McFadden Survey.

Operators Fail to Strike Oil in St. James Parish

Houston.—Attempt of operators to strike oil in St. James Parish, Louisiana Gulf Coast, proved a failure when Convent Oil Company abandoned Jacobs 1 last week at 2280 feet in gumbo. This test is located about 11 miles northeast of the town of St. James in Section 28-11s-4e.

The wildcat test was drilled in an area where no attempts had been made to establish the existence of a dome. Showings in the well at 1895 feet caused the operators of the well to set screen for a test but no show of oil was obtained. The hole was sidetracked at 1780 feet with the hope of picking up a better showing at the former level. The new hole failed to reveal any more favorable show and was drilled to 2280 feet before being abandoned.

Attempt to Get Production In San Jacinto County Fails

Houston.—Efforts of Arkansas Fuel Oil Company to locate production in San Jacinto County proved fruitless when it was forced to abandon its wildcat well, McMurray 1, last week at 4050 feet in shale. This test is located about four miles northeast of Cold Springs, 1255 feet southeast of the northwest line and 1945 feet northeast of the southwest line of the Garner Survey, in the east central part of the county.

The well, which was started the early part of this year, had a sand at 3491-3503 feet that gave evidence of some show of oil but drill stem test revealed only a show of salt water at that depth. It was thought that the Jackson formation which was struck at 2509 feet would yield some show of oil but none was encountered. Top of the Hockleyensis was hit at 3060 feet and bottom of the same zone was reached at 3380 feet.

The only other operation in the county at the present is E. P. Edwards et al's Bennett 1, which has been shut down for the past three months. The test was closed down after it had been spudded in and had been drilled to a depth of 40 feet.

Big Wells Predominate in East Texas Completions

(*Continued from page 76*)

Selby Oil & Gas Company, another Tulsa concern, having gauged 715 barrels the first hour from broken sand at 3528 to 3583 feet in the western part of Gregg County, near Gladewater.

Ward Oil Corporation, J. R. Elliott and Johnson Brothers' E. S. Thrash 1, located north of London and a connecting link for the Joiner and Kilgore fields, scored a heavier initial flow than anticipated through having gauged 24 barrels of oil per minute for a brief test from sand at 3753 to 3803 feet.

Pearl Oil Company and the Gulf-Devonia interests are scheduled to complete wells this week to the northwest of the above heavy producer.

Magnolia Starts Purchasing Oil From Adjoining Leases

Tyler, Texas.—Purchase of crude from adjoining lease owners in the Kilgore field was inaugurated by Magnolia Petroleum Company, which is adhering to its policy of paying Mid-Continent gravity scale prices in East Texas in settling with royalty owners as well as on outside purchases. This company gave Karona Oil Company connection late last week, and has also tied into properties of Houston Oil Company and others. Tidal Refining Company has also given market relief to connections other than absorbing the production of Tidal Oil Company in the Joiner and Longview fields. Tidal Refining Company has contracted for 10,000 barrels of space in Magnolia Pipe Line Company's 10-inch trunk line, and is providing a private gathering system in the Joiner field to make deliveries to the above trunk line near the Rusk-Panola County line.

Stanolind Crude Oil Purchasing Company is now producing and purchasing about 20,000 barrels of oil daily in Rusk and Gregg Counties, using the car loading facilities of others until its 50-car capacity rack in the Kilgore field can be made ready for service. The latter is making consignments to Baytown, Texas, and also to the Destrehan, Louisiana, refinery and tanker terminals of Mexican Petroleum Corporation, an affiliated concern.

Vacuum Oil Company is reported to have acquired a tank car rack site on the Texas & Pacific Railroad west of Camps, Gregg County, and on R. B. White farm, D. Moore Survey. This company has been buying East Texas oil from Houston Oil Company and others, and has proven oil leases that must be developed shortly.

Austin, Texas.—Senator Tom Pollard has called the first meeting for the organization of a state oil committee at 9 a. m. Wednesday, April 15. R. S. Sterling, C. V. Terrell, James Allred, Senators Woodward, Woodhull and Parrish and Representatives Hardy, Laseter, Howsley, McDouglad and Johnson as members of the committee.

South Texas Field Developments

EARL POST, ***Staff Representative, San Antonio, Texas***

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Another Natural Gas Horizon Is Proven in Caldwell County

San Antonio, Texas.—A new gas horizon was proven in Caldwell County, six miles southeast of Lockhart, by Mills and Chapman's McMahon 2, which is said to have gauged approximately 9,000,000 cubic feet of dry gas, with 380 pounds pressure, from a sand at 959-63 feet. The total depth is 976 feet and the 8¼-inch casing is set at 930 feet.

The exact location is 120 feet from the west line and 270 feet from the north line of the 50-acre tract in the Pinchbach Survey. The well is 50 feet due east of McMahon 1, which recently made a small producer at 2183 feet in a formation announced by the owners of the well as the Edwards lime. McMahon 1 is being deepened, the drill having reached 2215 feet on April 13.

Neuhaus and Camp's J. B. Moore, three-fourths of a mile northwest of the Mills tests, is said to be down 2515 feet and making preparations to abandon. This well recorded the chalk as being topped at 2350 feet.

Saxet Field, Nueces County, Is Widened 3½ Miles to Northwest

San Antonio, Texas.—The Saxet field, Nueces County, is believed to have been widened 3½ miles to the northwest as a result of the completion of Bess et al's Booery 1 as a large gasser in the deep horizon of the field. Although the gauge on the test has not been announced, it is said to be at least 20,000,000 cubic feet.

The well is showing 1425 pounds pressure on the tubing and 1525 pounds on the casing through a one-fourth-inch choke from the sand at 4037-46 feet. The well originally was drilled to 4220 feet, where it tested salt water and was then plugged back to 4050 feet.

The completion of this well likely will attract considerable drilling between the present producing area and the new producer.

Another extension was recorded for the field during the week when Moody-Seagraves Producing Company's Sedwick 1 was completed for about 100 barrels initial production from the sand at 4097 feet. The well is 1200 feet north of Houston Oil Company's Hunter 1, nearest producer.

Results of Refugio Choke Order To Be Brought Before Commission

San Antonio, Texas.—Results of the one-quarter-inch choke order issued for the Refugio field early in March will be discussed at a hearing before the oil and gas division of the Texas Railroad Commission in San Antonio, April 22.

On March 5, all wells in the Refugio field producing from the deep horizons were ordered placed on one-quarter-inch chokes on both tubing and casing in an effort to reduce gas wastage. The wells have been producing by that method ever since.

The commission has requested the presence of engineers, field superintendents and other company officials to appear here to testify before the commission as to the amount of production lost or gas saving effected through this method of production. A permanent order possibly will result.

Several producers were reported in the Refugio field during the week. They included United Production Company's O'Brien 10, which is rated at 700 barrels of pure pipe line oil on a one-fourth-inch choke at 6456 feet; Pearson Properties, Inc.'s Ryals 4 is flowing 300 barrels at 6450 feet and is registering 1900 pounds on a one-fourth-inch choke; Moody-Seagraves Producing Company's Mercy Academy 2 has been completed as a gasoline well at 6390-6417 feet, showing 1900 pounds pressure on a one-fourth-inch choke. The well at last reports was spraying better than 50 barrels of gasoline and the darkening of the color of the fluid indicated that it might turn into an oil well, increasing its output.

Pettus Gets East Extension; North Extension in Prospect

San Antonio, Texas.—Another east extension was effected and a north extension was in prospect in the discovery pool, Pettus, Bee County, by United Production Company's Rays 35 and 36. The first well has been completed as a producer, while the second has cored a highly impregnated sand and is setting casing to test.

The Ray 35, located 1100 feet east of Ray 34, nearest producer, is producing 480 barrels on a three-Eighths-inch choke from a sand at 3958-66 feet. The 6⅝-inch casing is set at 3957 feet. It is showing 300 pounds working pressure.

Ray 36, 1300 feet north of the Ray 35, is waiting on cement to test a sand cored at 3930-40 feet. The 6⅝-inch casing is set at 3928 feet.

Both wells are located in the T. Hanson Survey and are about one-half mile from the discovery well.

In the Grayburg area, seven miles southwest of the Pettus townsite, Mineral Oil Company (Mauldin and Fisher) is preparing to drill in its A. J. Kimball 1 at 3535 feet. This well recently tested 175 pounds pressure in 3½ minutes from a sand cored at 3537-40 feet. This well is located 300 feet south and 21 degrees east of Grayburg Oil Company's Kimball 1, which last summer showed for a producer at 3545-55 feet, but later was abandoned after salt water broke in. Considerable drilling has been carried on in the vicinity but no producers have been completed to date. The Grayburg and the Mineral wells are both located in the Stephin Winship Survey.

San Antonio, Texas.—Another good producer was scored for the southwest extension of the Schoolfield and O'Byrne field of Duval County by Breeding, Frasher et al's Bishop Cattle Company 2, which flowed at a rate of more than 1200 barrels from 2373 feet. This well is the fourth oil producer in the extension area. There also are two gassers.

The test is a diagonal offset to Duval Oil Company's Bishop Cattle Company 2, which flowed about the same amount of oil recently.

The Breeding, Frasher et al test cored a sand at 2320-28 feet which showed a little oil and then drilled to 2365 feet where

it encountered a second sand which was cored to 2373 feet. The latter sand showed the prolific production. The 6⅝-inch casing is set at 2320 feet.

The deepest well in Duval County at this time is Humble Oil & Refining Company's Kohler 50, which is making hole at 5888 feet. This well is located on survey 164 of the Kohler field.

McFadden Sector of Victoria County to Get 5750-Foot Test

San Antonio, Texas.—A test to 5750 feet if production is not found at a shallower depth is announced in the McFadden sector of Victoria County. The well is simpson-Fell Oil Company and Westheimer et al's Levi 1, 10 miles south of Victoria. The test is now rigging up.

Another deep test for the immediate sector is the T. B. Slick Estate's McFadden 1, several miles northeast of Lion Oil Refining Company's production on the McFadden ranch. Derrick already is up and drilling will commence shortly. It is on an 8000-acre block under lease by this operator.

The exact footage of either location has not been announced to date. C. R. & M. Drilling Company has the contract to drill both wells.

An unsuccessful attempt was made to get a drill stem test of a sand at 3791 feet in United Production Company's McFadden 1-B, one mile east and slightly north of Lion Oil Refining Company's McFadden 2, in the McFadden field, Victoria County. The test is now drilling at 3823 feet. Lion Oil Refining Company is drilling its McFadden 3-A, Maria J. Traviesa Grant, at 2700 feet. It is expected to pick up the gas sand around 3700 feet.

Independents Ask Valuation Of All Pipe Lines in Texas

Austin, Texas. — The Independent Petroleum Association through C. C. Wild, executive vice-president, filed a petition with the Texas Railroad Commission, April 14, requesting a complete survey and appraisal of all Texas pipe lines for the purpose of adjusting rates. The point was made that rates should be proportionate to the investment and that present rates are too high as aggregate net return on lines operated by companies reporting to the commission are 23 per cent for 1930, which is too much for a public utility.

It was further pointed out that rates are set too high to discourage rather than to encourage shipping to make transportation through pipe line unprofitable unless the shipper owns the line. This has completely eliminated independent shipments in some places in the state. Thus common carriers control distribution and prevent the sale of transported oil to competitors, thus creating a monopoly.

The contention was also made that lines are not being built to new fields to transport oil for others but only for the production owned by associated companies, thus controlling ultimate destination of new fields' production. It was pointed out that in this manner common carriers were using the right of eminent domain for private purposes.

It was further pointed out that a fair earnings basis would cut present rates 40 to 60 per cent and allowances for evaporation and shrinkage would be cut further. The association requested the commission to cut the present rates at least 50 per cent, and that in determining the rates, lines be considered one system regardless of common ownership by many corporations.

Jake Wolters, counsel for The Texas Company, urged an immediate hearing.

NORTH AND WEST TEXAS ▼ FIELD NOTES ▼

First Deep Lime Production Is Scored in Wichita County

Wichita Falls, Texas.—Wichita County's first deep lime production became established when Deep Oil Development Company's Munger 1, located in the K-M-A field in the southwestern part of the county, showed a potential yield of about 300 barrels of 44 gravity oil daily after being shot with 500 quarts of nitro in broken sandy lime formation at 3675-3942 feet April 12. The well passed up the oil horizon last January and February to fulfill a 6000-foot contract, but when sulphur water was encountered in the Ellenberger lime at 5400-5430 feet a compromise was obtained on the contract. The hole was plugged back from 5430 to 3977 feet with mud and cement before being shot. This is the deepest test in the county; production is coming from a level that is almost twice as deep as the average oil horizon found in the county. About one-half dozen tests within a four-mile radius of this new strike are getting under way to try for deep production.

Deep Oil Development Company's L. F. Wilson 1, lease 4-A, which uncovered the deepest known oil horizon in east central Archer County on March 21 from Canyon lime at 2208-14 feet, is holding to its initial yield of 475 barrels of 42.6 gravity oil daily by swabbing at intervals. The well also makes regular heads. This deep producer has resulted in about one dozen tests being started in the general area for the 2200-foot horizon, although a large number of the tests will involve the deepening of old wells and abandoned holes. Deep Oil Development Company is composed of operators and business men from various points in the North Texas district, and the company has already gained a record of two successful oil completions from the first three deep drilling projects. A fourth test is being started as a west offset to the Wilson ranch producer in Archer County.

San Angelo, Texas.—Flowing 20 barrels of oil hourly from lime formation at 4120 to 4230 feet, Southern Crude Oil Purchasing Company's second test on the Cowden ranch in north central Ector County promises to make a much larger producer than the company's discovery well. This second test is making about seven million cubic feet of sulphur gas from upper section of the lime, and scored a gain at the bottom of the hole, thereby causing the loss of a string of tools. Deeper drilling will be attempted when the tools are recovered. The company has a solid block of seven sections under lease around the two flowing wells.

Tyler, Texas.—Having increased its production in the Kilgore field to 55,000 barrels daily toward the close of last week, Humble Oil & Refining Company is to be fortified with a second direct trunk line outlet within a few weeks. Humble Pipe Line Company is at work on a 33-mile, eight-inch line that will extend from the western portion of the Joiner field, following a southwest course to the Boggy Creek field, where connection will be made with an eight-inch trunk line that ties into the company's main system near Mexia. Humble Oil & Refining Company has been successful in transporting 55,000 barrels of oil daily by crowding its Van-Louisiana trunk line and working its Kilgore field rack at capacity.

Louisiana--Arkansas Field Notes

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Complete 30,000,000-Foot Gas Well at Bellevue, Bossier Parish

Shreveport.—The southwest flank of the Bellevue structure in Bossier Parish, highest point on the Sabine Uplift, yielded another gasser during the past week when H. I. Morgan and associates completed Kendricks B-13, NE SW Section 22-19-11, at 1764 feet in the upper Trinity, making an estimated gas yield of 30,000,000 feet of dry gas daily.

A wildcat just southeast of the city limits of Shreveport in Caddo Parish, ended in failure during the past week when Ralph Davidson and associates abandoned Felix Weiller 1, Section 33-17-13, at 2564 feet as a dry hole. This test reached base of the Blossom at 1997 feet and had tested hot salt water in a drill stem test from 2440 to 2447 feet after having previously been dry from 2440 to 2471 feet.

Pelican Natural Gas Company, drilling a 5500-foot test to the Trinity just northwest of Shreveport, spudded during the week and cemented 15½-inch surface casing at 200 feet.

Three dry holes in outside tests featured the past week in Zwolle. Three new locations were made in that field during the week, all being outside tests.

Three wildcats around the Zwolle area are being watched closely. Packard Oil Company's Davis 1, SW SW Section 8-7-10, eight miles east of the Zwolle southeast field, with elevation of 337 feet, topped Zwolle marl at 2650 feet and cemented 6⅝-inch casing at 2636 feet with total depth of 2658 feet. Sabine Royalties Company, Incorporated's Bill Hill, east of production in the southeast field in 10 days drilled to the marl at 2217 feet and has cemented six-inch on bottom at 2230 feet. Six miles to the north this company, which is planning six tests in Zwolle, made location for Skinner 1, SE SW NW Section 5-8-11.

Northwest of the east field area, Durham Oil Company passed out of the Zwolle chalk at 2595 feet without getting production and is drilling at 2620 feet.

Prepared to go at least to the Woodbine, E. T. Oakes is building a 120-foot derrick for Johnson 1, SW NE NW Section 30-13-15w, De Soto Parish, in a wildcat area slightly to the northeast of where Pilgrim Oil Company seven years ago drilled a series of tests on the Ramsey lease, all of which had showings of gas at several levels, one of the wells having gauged 17,000,000 feet of gas. One of the tests went to 5063 feet, at that time holding the depth record for North Louisiana. The structure for Oakes' test was worked out by H. D. Easton, Shreveport geologist.

Checking approximately 50 feet high, Richland Operating Company extended production in the Richland Parish gas field over one-half mile east during the week when Cooper 1, Section 13-16-6e, was completed at total depth of 2400 feet gauging 39,519,613 cubic feet of gas with rock pressure of 590 pounds.

Shreveport.—By letting three offset wells, including a relief well just drilled, blow for several hours, Arkansas Natural Gas Corporation on Sunday, April 13, was able to kill Thomason C-1, 1320 feet south and 940 feet west northeast Section 21-16-6e, Richland Parish, which had been on fire for more than two years and had formed a crater approximately 300 feet in diameter. The company has spent over $200,000 in efforts to kill the well. The latest relief well was Thomason C-5, SW NE NE Section 21-16-6e. The cratered well blew in February 3, 1928, and after getting under control, ignited. Later it was killed and a short time later again ignited, since that time defying efforts to extinguish it.

Stake Location for Delayed 5000-Foot Test at Smackover

Shreveport. — Definite staking of a location for Smackover's long-awaited 5000-foot test in Union County, Arkansas, was announced during the week ending April 11, by Lion Oil & Refining Company and associates. The test is Guy P. Hayes A-9, 242 feet south and 264 feet west, NE SW NE Section 4-16-15. The Smackover field has never had a test of this depth. There are four strata of sand from 1900 to 2700 feet producing in that field. Several South Arkansas business men are interested in the 5000-foot test to the amount of $10,000.

Another location in Arkansas during the past week was a wildcat in Sevier County, Southwest Arkansas, this being Tri-State Oil & Gas Company's Bank De Queen 1, in the south half of SW Section 34-8s-32w.

Marine Oil Company added another producer in the Urbana field of Union County when Thompson E-1, Section 10-18-13, was completed at 3546 feet flowing 210 barrels of oil daily by heads. Wilson and Chapman, one-half mile north of production in that field has rig up for Ned Parker 1, NW SE Section 3-18-13; it is an east offset to the same operators' Hadley 1, NE SW Section 3-8-13, which is standing with 600 feet of fluid in the hole 30 per cent salt water at 3570 feet.

J. D. Reynolds has standardized another test in the Stephens townsite, Ouachita County, his Grayson 1, Section 21-15-19, pumping 40 barrels daily, two per cent fresh water, at depth of 2197 feet.

Ohio Oil Company's Riley Furlough 3, Section 12-17-14, in the southeast part of the old Champagnolle field of Union County, came in April 8 and flowed 419 barrels of fluid in the first 16 hours, 20 per cent salt water, through 1½-inch choke, and then went dead. Total depth is 3013 feet; 6⅝-inch casing was cemented at 2987 feet.

Test on Southwest Side of Jackson Area Is a Failure

Jackson, Miss.—Two new wildcat locations and completion of a dry hole in the southwest edge of the Jackson gas field, featured activity in Mississippi during the week ending April 11.

M. L. Cully and associates have derrick up for Owens 1, Section 2-8n-9e, Scott County, Central Mississippi. This county, 50 miles due east of Jackson has not had a test drilled there since discovery of the Jackson field. Dixie Petroleum Company, which recently abandoned a wildcat test in Warren County, Vicksburg district, has derrick up for another test in the same area, Pat Henry 1, SE NE Section 36-17n-4e.

Cane River Oil & Gas Company's Kabbes 1, NE SW Sec-

tion 15-5-1e, Hinds County, on the southwest edge of the field, was abandoned as a dry hole at 3265 feet. It had been temporarily abandoned for some time. It marks the limits of the field in that direction.

Considerably more importance than at first was given Amory Petroleum Corporation's Harris 1, NW NE Section 18-13s-17w, Amory district's fourth commercial gasser, has been attached with announcement that this well had 20 feet of sand from 2379 to 2399 feet, elevation being 455 feet. This well is 33 feet lower than the first well in the field. Incorrect identification of formations which bailed dry before the gas sand was encountered, had at first caused operators to think they were 26 feet high. The pressure in this well built up from 636,000 cubic feet at first with 200 feet of fluid in the hole at 3 p. m. the day of completion to 2,064,000 feet at 5 p. m. the same day with 25 feet of cavings in the hole. Forty hours later the well gauged 5,598,000 cubic feet of gas with rock pressure of 512 pounds. The bottom of the fine quartz sand had not been reached at 2399 feet.

Late last week Ohio Oil Company was straightening crooked hole at 3195 feet in brown sand in Cantrell 1, NE NE Section 16-15-5e, Clay County, adjoining county to the southwest to Monroe County, in which is located the Amory gas field.

Gulf Refining Company's Box 1, NW SE Section 11-2n-11e, Clarke County, East Central Mississippi, late last week was still in Selma chalk at 3290 feet, this formation having been topped at 2635 feet, elevation being 221 feet.

Pocahontas Natural Gas Company's Adams Banks 1, SW SW Section 10-3n-7e, Smith County, South Central Mississippi, late in the week was drilling lignitic Wilcox shale at 3500 feet, elevation being 425 feet.

Plan Gas Line from Jackson To Hattiesburg, Mississippi

Jackson, Miss.—Possibility that a gas line of size as yet undetermined will be laid from the Jackson gas field to Hattiesburg, Mississippi, 90 miles south of here, is seen in a resolution recently adopted by a special committee appointed to investigate natural gas for that municipality, which has a population of approximately 20,000.

The investigating committee authorized Mayor W. S. F. Tatum to appoint another committee of 10 members to organize a company with the purpose of financing and constructing the line to Hattiesburg and intermediate points with the possibility that Laurel, 28 miles northeast of Hattiesburg and having about the same population may also get gas.

Meanwhile the W. T. Moran Corporation of Houston, Texas, has submitted a bid for the Hattiesburg natural gas franchise. This company offers to build a line to Jackson, as well as a distributing system. An alternative is that the city build the distributing system, the W. T. Moran Corporation to furnish the gas at the city's gates; and a third is that if the city not take either of the other propositions the W. T. Moran Corporation would consider a profit-sharing agreement to provide that half the net earnings of the company over an amount equivalent to eight per cent return on the investment be paid annually to the municipality. The W. T. Moran Corporation also proposed that two gas tests would be drilled within 25 miles of Hattiesburg and if commercial gas is found sufficient to warrant it a 20 per cent reduction in the rate would be made. It was proposed at the start to charge domestic users $1.50 for the first 1000 feet per month, 85 cents for the next 1000 feet and 60 cents for all above that amount.

First Harrison County Test To Hit Woodbine Is Failure

Shreveport.—The first test in Harrison County, East Texas, to strike the Woodbine sand since the drilling campaign in that county started following the Gregg County discovery well, tested dry April 8 in a drill stem test of five feet of sand which showed a slight oil saturation when encountered from 3693 to 3698 feet, with elevation of 396 feet, in Sinclair Oil & Gas Company's Davenport 1, J. V. Morton Survey, on a 2000-acre block four miles northwest of the town of Harleton. The test is now shut down in Georgetown at 3735 feet.

Another Harrison County test in which Woodbine failed to appear was definitely abandoned during the past week. This was W. H. Hobson, Trustee's, Taylor 1, Henry Vardeman Survey, abandoned in Georgetown lime at depth of 3540 feet, elevation being 284 feet. It topped chalk at 2095 feet and topped the Georgetown lime at 3183 feet.

Marion County also added a dry hole in the Georgetown at depth of 2827 feet, this being Shasta Oil Company's Johnson 1, William Mason Survey, which topped Georgetown at 2825 feet.

Panola County added a wildcat failure during the past week when Knott and associates abandoned Marion Durham 1, Charles Haley Survey, as a salt water hole in lime and shells at depth of 3190 feet. This test had shown about 50,000 cubic feet of gas with much salt water at 2998 feet.

Shelby County obtained two new tests during the week, H. H. Gracey having derrick up for J. A. Morrison 1, William English Survey, and T. A. Martin having built derrick for J. B. Bush 1, Alfred Lindsey Survey. This gives Shelby County eight operations, including derricks up.

Several Northern Mexico Wildcats Drilling Ahead

Monterrey, Nuevo Leon, Mexico.—Following an unsuccessful attempt to make a drill stem test of sand at 2068-2071 feet, Compania de Petroleo Mercedes was drilling ahead at 2350 feet on April 10 in Rio Bravo 1, wildcat located 17 miles due south of Sam Fordyce, Texas, in the state of Tamaulipas, northern Mexico. The sand which was found from 2068 to 2071 feet is reported to have showed considerable gas, but a drill stem test which was subsequently attempted failed when the tester seat broke.

Ohio-Mexico Oil Corporation is drilling at 900 feet in La Presa 1, wildcat located approximately 40 miles northwest of the Rio Bravo well, on the Mier structure, a few miles southeast of Mier, Tamaulipas, and about eight miles south of Roma, Texas, or 16 miles west and a little south of Rio Grande City, Texas. The company has a concession of about 16,000 acres (five miles square) covering the Mier structure and extending southeasterly from a point about three miles south of Mier.

Control de Administration del Petroleo Nacionales, operating company of the Mexican government, is reported to be preparing to go back in the hole in Concta Number 1, state of Tamaulipas, to drill deeper from present depth of 3900 feet.

In the state of Nuevo Leon, Mexico, of which Monterrey is the capital, Compania de Petroleo Mercedes is fishing in gray lime at 4585 feet in Chapa 1, wildcat located 4½ miles west of General Trevino and seven miles south of Agualequas. The well is being drilled with cable tools, whereas those mentioned above are all rotary drilled wells. On North Aldamas anticline, Nuevo Leon, approximately 20 miles southwest of its Mier structure test, Ohio Mexico Oil Corporation is putting down its Number 1, a wildcat, but the well is at present reported shut down at 2550 feet.

International Drilling Congress Abandoned

Berlin, Germany.—Announcement by M. Laubsch, secretary of the German National Committee for International Drilling Congresses, calls attention to the fact that the Third International Drilling Congress will be held at Berlin in 1933 instead of 1931 as formerly planned. The change in the date has been approved by the permanent secretary at Brussels, the French committee at Paris and the Roumanian committee at Bucharest.

The first congress was held in Bucharest in 1925 with plans made for holding the meeting every fourth year thereafter. The second congress convened in Paris in 1929. Former plans called for the congress to be held in Berlin in 1931.

The general depression experienced in the petroleum industry has made it necessary again to change the date of the congress and it is thought that by that time the German committee will have obtained sufficient funds to hold the congress on a scale befitting the occasion. The International Geological Congress to be held in Washington in the summer of 1932 would prevent many interested parties attending both congresses, thus making 1933 the earliest possible meeting date.

According to the announcement of M. Laubsch, papers will be presented as in the previous congresses and a very comprehensive exhibition of models of modern drilling appliances and tools will be demonstrated to visitors. Members of the congress will also have the opportunity of visiting the State Geological Institute at Berlin and numerous other institutions working in connection with the oil industry.

Work entrusted to national committees of the various foreign countries will have been completed by that time and reports will be available on the findings of the committees. Decisions arrived at during the First International Drilling Congress in Bucharest were:

1. Organization of national drilling committees in all countries.

2. Standardization of the scientific and technical experiences gained in the technique of drilling by the national committees in each country individually.

3. Creation of international drilling statistics.

Two of these three decisions have already been carried out. The Roumanian national committee has appointed a sub-committee and there are at present 16 national committees organized.

The second congress at Paris in 1929 made the agreement that it would:

1. Prepare the publication of geological maps with accurate indications of the oil areas and their profiles; also special maps of oil fields of particular interest.

2. Submit proposals for the preparation of drilling forms to the permanent secretary at Brussels.

Plans for the congress are gradually rounding into shape and the German committee will be fully prepared to be host to the number of members who will find it possible to attend the congress in 1933.

Denver, Colo.—Work of rigging up The California Company's deep test in the old Rangely shallow oil field, Northwestern Colorado, is under way. Land has been sub-leased from the Leonard interests of Washington, Pennsylvania. Operation is a joint one with The Texas Production Company and other major concerns.

Hobbs Prorated Allowance Will Be Increased May 1

Dallas, Texas.—Production allowance for the Hobbs field, New Mexico, will be advanced about 5000 barrels daily to a new peak level of about 37,500 barrels effective May 1 for an indefinite period. Announcement to this effect was made by E. G. Allen, production manager in southern district for Shell Petroleum Corporation, during a meeting of Hobbs operators held here April 10. Shell Petroleum Corporation is increasing its nominations from 11,000 to 15,000 barrels daily, representing outside crude purchases as well as controlled oil, and by doing so the field automatically earns a greater production advance because of several companies absorbing their own production, but not nominating. Humble Oil & Refining Company and Atlantic Oil Production Company are to adhere to their original nominations of 7500 and 10,000 barrels, respectively. Gypsy Oil Company, The Texas Company and Tidal Oil Company have private transportation arrangements that enable each to absorb its own production.

Hope to Find Gas Production for Towns of Southwestern Colorado

Denver, Colo.—A drilling program for the purpose of developing a gas supply adequate to care for the needs of towns in Montezuma County, Southwestern Colorado, is the plan of a group headed by J. W. Pyatt and Fred C. Haller, it was recently announced. The structure is known is Mount Lookout, and several shallow wells have found small quantities of gas in the Dakota Formation around 700 feet.

Northern Pipe Line Company has been recently organized to build a pipe line system for the project, and Tri-City Gas Company will be the distributing concern.

Mancos and Dolores have already granted franchises; Cortez is delaying its decision pending the results obtained in a well now drilling near its municipal limits.

Billings, Mont.—A completion in the Elk Basin field, Northern Wyoming, is announced by Henderson Producing Company of this city. Well is good for 10,000,000 cubic feet from total depth of 2836 feet, some four feet in the Dakota sand. Oil production in this district comes from the Frontier series; the Lakota has never been tested.

Casper, Wyo.—Indications of production in the Dakota sand in Midwest Refining Company et al's joint deep test on the Midway Dome structure were reported from location last week. The Dakota was topped at 5968 feet, core was run at 5969 feet, and first removed when hole bottomed at 5973 feet. Oil and gas saturation was showing. Top of the sand was very hard and fine. Another core showed more saturation.

Tyler, Texas.—Having earned a reputation of offering ample oil producing acreage for all companies and operators to participate, East Texas now has the unique distinction of being invaded by a negro woman from Oklahoma City who has started work on assembling a wildcat drilling block of about 4500 acres in the southeastern part of Hopkins County. Scouts report that the woman proposes to carry out a drilling contract if the desired acreage can be obtained.

Completions for Past Week in U. S. Fields

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CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
LONG BEACH—		
Dabney-Johnston Oil Corp., No. 57.	40	5855
Shell Oil Co., Patton-Wilson 11....	50	7065
Stakemiller 9	300	4811
PLAYA DEL REY—		
Ohio Oil Co., No. L-2.....1800		6220
RICHFIELD—		
Valencia Holding Co., Kroeger 1...	150	5030
VENTURA AVENUE—		
Associated Oil Co., Lloyd 56.....	150	7200

KANSAS

GREENWOOD COUNTY—		
Smith et al, Hess 1, nw sw ne 34-22-11e	10	1883
Polhamus et al, Smith 1, se ne sw 7-24-11e	*	1955
LYON COUNTY—		
Griffith et al, Kind 1, nw c, 8-19-10e	*	2695
McPHERSON COUNTY—		
Derby Oil Company and Empire O&R, Domsch 1, ne c nw 6-20-1w	925	3406
RICE COUNTY—		
Twin Drlg. Co. and Phillips, Rice 1, sw c ne 3-21-6w	100	3326
SEDGWICK COUNTY—		
Eisenhour et al, Horde 1, sw c se se nw 19-27-2e	210	2981

OKLAHOMA

CARTER COUNTY—		
Carter Oil Co., Robb 1, sw c nw sw nw 19-1s-2w 1240		1741
Amos Drlg. Co., Hooks 2, sw se se 13-1s-3w 1450		2005
CREEK COUNTY—		
R. E. Freeman, Green 1, nw c se nw 15-19-7e	75	2664
McCulloch Oil Co. et al, Woffard 1, nw c sw se 15-19-7e	25	2750
A. A. Bailey and Johnson, Weaver 4, nw sw nw 18-19-9e	120	2207
J. E. Wallace et al, Baker 1 (owd) se ne nw 14-17-10e	*	2896
GRADY COUNTY—		
J. B. Nichols, Child 1, ne c 35-4n-8w .....¶17½		1911
MUSKOGEE COUNTY—		
G. D. Robinson, London 1, cwl ne sw 17-13-16e .....¶5¾		1092
Western Drlg. & Elec. Co., Fields 4, ne c sw 9-15-18e	*	1162
OKLAHOMA COUNTY—		
Westgate Oil Co., Wilson 1, nw c ne sw nw 10-11-3w 5080		6400
Phillips Pet. Co., Temple 1, nw c ne ne nw 10-11-3w 8405		6336
Phillips Pet. Co., Schilling 1, se c nw ne sw 10-11-3w 7305		6409
I.T.I.O., Earp 1, ne c 22-11-3w....1775		6580
OSAGE COUNTY—		
Galt Brown 1, nw c sw, 14-24-8e..	10	2310
Kay County Gas Co., 9 "B", se nw sw 22-24-7e	¶½	2607
E. O. Platter 6, ne c nw sw ne 30-22-9e	10	511
L. G. Stanley et al, 1, se c sw 4-28-7e	*	2865
C. O. Buckles 2, sw ne ne 33-22-11e	*	1562
Okla. Nat. Gas Co., 1823, se ne nw 3-20-12e	*	1675
Oklahoma Power and Water Co., 130, se c ne sw nw 4-20-10e	*	2118
Brewer et al, Needham 1a, cwl nw ne 1-20-7e	*	2855
PONTOTOC COUNTY—		
Edna Marie Oil Co., Hanell 1, ne c se 29-5n-8e	*	865
SEMINOLE COUNTY—		
John Droppleman, Devers 1 "A", se nw sw 29-6-63	675	2665

For Tabulation and Comparison See Market Section

Company, Well and Location	Initial Production Bbls.	Depth
TULSA COUNTY—		
Chandler and Day, Shields 1a, se c 20-19-14e .....¶3½		1302
Ohio Pet. Co., Haikey 3, se c sw sw 33-18-14e	190	1487
L. L. Boyd, Costello 1, se sw ne 2-18-14e	*	1450

EASTERN STATES

PENNSYLVANIA

GREENE COUNTY—		
Equitable Gas Co., Stephens 1.....	¶1	....
ALLEGHENY COUNTY—		
Lovish Oil & Gas Co., Lovish 3...	1	....
Miller & Co., Enders Hrs. 1.....	¶1	....

WEST VIRGINIA

CLAY COUNTY—		
Thompson Gas Co., Cochran-Eakley, T-29	¶1	1814
H. B. Davenport, Thompson Land & Coal Co., 3 ¶¼ and.....	2	....
United Fuel Gas Co., Pierson 4266.	¶¼	1864
CALHOUN COUNTY—		
L. P. Bickel, Bland 1.....	*	2170
G. L. Cabot, May 1.....	*	1861
Hope Natural Gas Co., Bell 5225..	¶¼	2232
RITCHIE COUNTY—		
Bachelor & Co., McCullough 8.....	¶½	1838
Hope Natural Gas Co., Wilson 1...	*	1900
Reno Oil Co., Gainer 1.....¶¼		....
WOOD COUNTY—		
G. W. Grant & Co., Henrie 8.....	2	....
WETZEL COUNTY—		
R. V. Hennen, Alexander 1.....	¶½	3710
HARRISON COUNTY—		
Reserve Gas Co., Shinn 1.....	¶¼	....
ROANE COUNTY—		
Wiseman & Jackson, McQuinn 1...	*	1996

SOUTHEASTERN OHIO

WASHINGTON COUNTY—		
Weppler & Bay, Lauer 6.....	2	339
John Wagner, Vaughn 2.....	*	725
Franklin Drilling Co., Ice 3.....	*	2181
English Bros. Gardner 1.....¶1¼		1670
MONROE COUNTY—		
Robinson & Co., Miracle 1.....	2	1253
Newhart Drilling Co., Burkhart 1..	¶¼	1959
NOBLE COUNTY—		
E. A. Burbacker & Co., Fee 1.....	¶½	1287
Frank Morrell, Hutcheson 5.....	¶¼	1343

CENTRAL OHIO

ASHLAND COUNTY—		
Robinson & Co., Sprang 1.....	¶¼	663
BELMONT COUNTY—		
W. C. McBride, Inc., Smith 2....	*	1389
COSHOCTON COUNTY—		
The Preston Oil Co., Clark 1.....	*	3130
ATHENS COUNTY—		
Shady River Oil & Gas Co., Chapman 13	¶½	1210
GUERNSEY COUNTY—		
The Preston Oil Co., Stocker 4....	20	3600
LICKING COUNTY—		
G. H. Long, Ashcraft 3	¶¼	666
Wehrle Gas Co., Robinson 4.....	*	2122
MEDINA COUNTY—		
Edson Sons Co., Packard 12.....	5	343
The Preston Oil Co., Cleveland 3..	15	456

INDIANA

WARRICK COUNTY—		
Morris Oil Co., White 1.....	*	....

MISSOURI

ST. LOUIS COUNTY—		
Meramac Oil Co., Valley Park Realty Co. 1	*	1153

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
BARREN COUNTY—		
Garvin Oil & Gas Co., Myers 1....	¶2	....
Edwards Estate 1.....¶2½		....
Unknown Parties Wilson 1, ...¶¼-50		....
Edwards 1	50	....
Montgomery 1	¶¼	....
Curle 1	*	....
Guinn 1	¶½	....
DAVIESS COUNTY—		
Ira C. Huff, Rogers 1	*	....
GREEN COUNTY—		
Pearson Petroleum Co., Madden 1..	*	....
Courtney Combs & Co., Givin Bros. 1	*	....
HANCOCK COUNTY—		
Huff, Rossella & Co., Parrott 1...	25	....
HENDERSON COUNTY—		
Christian & Schmidt, Walker 2....	10	....
Walker 3	*	....
HART COUNTY—		
Laramore-Snyder & Co., Grubb 1..1000		....
B. F. Wilson & Co., Wilson 2.....	300	....
H. F. Norris & Co., Smith 4.....	150	....
Norris Bros. Pedigo-Thomas 1.....	¶¼	....
Norris & Davis, Hatcher 4.....	200	....
H. Z. Clark, Mayfield 1.....	*	....
Gillock 1	200	....
Bales & Co., Blue Springs lot 1....	100	....
B. F. Wilson, Lockett 1.....	50	....
Lockett 2	50	....
Lockett 3	50	....
L. C. Young, Richardson 1.....	150	....
Legrande 1	200	....
McKinney 3	150	....
Ward 1	50	....
C. H. Clark, Peyton 1.....	200	....
Pearson Oil Syndicate, Edwards 1..	50	....
Bales 1	¶¼	....
C. E. Daugherty, Richardson 1.....	50	....
John Wright, Edwards 1.....	50	....
Taylor 1	*	....
John H. McClurkin, McCubbin 1..	¶½	....
Chaney 1	*	....
McClurkin, Hughes & Co., Vora 1..	*	....
Richards & Gebbe, Newberry 1....	*	....
Richards 1	*	....
Mecca Oil Co., Stales 1.....	*	....
Tichenour & Mann, Reynolds 1....	*	....
Fred Estes, Simpson 1.....	*	....
Unknown Parties, McKinnie 1.....	*	....
Sandidge 1	*	....
Arthur 1	*	....
Chapman 1	*	....
McLEAN COUNTY—		
McLean Development Co., McManama 2	20	1101

MISSISSIPPI

HINDS COUNTY (Jackson Dist.)—		
Cane River O&G Co., Kabbes 1, 15-5n-1e	*	3265

NORTH LOUISIANA

BOSSIER PARISH, (Elm Grove).—		
United Gas Pub. Ser. Co., Murff 1, 24-17-12 (sec. comp.)	¶2	1770
RICHLAND PARISH—		
Richland Operating Co., Cooper 1, 13-16-6e .....¶39½		2400
UNION COUNTY—		
Nemours Corp., Stringer 1, 14-21-3e	¶1¼	2183

LOUISIANA GULF GOAST

HOUMA—		
La. Gas & Fuel Co., Minor Est. 1	*	6500
ST. JAMES PARISH—		
Convent Oil Co., Jacobs 1	*	2240

(Continued on page 87)

Permits Granted For New Wells

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CALIFORNIA

ELK HILLS—Standard Oil Co., No. 80, 35-30-24.

HUNTINGTON BEACH—Blake & Frampton, No. 1, 2-6-11. Venture Oil Co. Clark 1, 34-5-11.

LONG BEACH — Miley Pet. Corp., Miley-Signal 2, 19-4-12. General Pet. Corp., Boyle-Perry 2, 30-4-12.

MONTEBELLO—Standard Oil Co., Baldwin 16, 31-1-11.

SANTA FE SPRINGS—General Pet. Corp., Hill-Midway 103, 6-3-11. Universal Consolidated Oil Co., Blanchard 12, 6-3-11; Blanchard 13, 6-3-11.

SUNSET—Tannehill Oil Co., Catfish 10, 33-12-24; No. 15, 34-12-24.

VENTURA—Associated Oil Co., Lloyd 54, 27-3-23.

OKLAHOMA

CADDO COUNTY—Magnolia Pet. Co., Estes 2, se sw ne 10-5-9w.

CREEK COUNTY—J. B. Grieves, Lowe 10, nw c se ne 13-19-8e.

GRADY COUNTY—Margay Oil Co. et al, Carson 1, cwl nw nw 25-4-8w.

JEFFERSON COUNTY — C. D. Chenault, Grover 1, ne nw sw 23-7s-6w.

McINTOSH COUNTY—J. S. Routt et al, Wolfe 1, c sw ne se 34-12-15e.

MUSKOGEE COUNTY—W. F. Simpson et al, Manuel 1, nw c sw se ne 24-15-17e.

OKFUSKEE COUNTY—Mid-Continent Pet. Corp., Phillips 1, (owd) ne c sw 32-12-10e.

OKLAHOMA COUNTY—Phillips Pet., Hyland 2, sw c ne 10-11-3w.

OSAGE COUNTY—F. J. Carroll 3, ne c se, 15-24-8e. The Texas Co., 1, csl se sw 12-24-8e. Producers & Refiners, 1, nw se sw 15-24-7e. Bacon and Voyles 10, nw c sw nw sw 30-23-9e. E. O. Platter 7, se c nw ne 30-22-9e. Turman Oil Co., 7, cel w½ sw 11-21-8e. Okla. Nat. Gas Co., 1824, se c ne 18-20-12e. Okla. Power and Water Co., 119, se c sw sw 4-20-10e (owd.) J. L. Essley 1, sw c se 1-20-9e. A. G. Oliphant 3, ne se se 21-24-9e.

PAWNEE COUNTY—Thompson and Black, Mote 4, nw ne sw 14-20-9e. T. E. Harris, Brodell 1, nw c se, 9-20-9e. Peter Adamson, McFall 1, ne c se 4-20-8e. Peter Adamson, Cohen 1, nw c sw 3-20-8e.

WAGONER COUNTY—A. E. Carder, Atkins 6, nw c se se 25-18-15e.

KANSAS

GREENWOOD COUNTY—Gore and others, Smith 1, sw c ne, 6-24-12e. Phillips Pet. Co., Beal 7, se c ne 28-23-11e. Smith et al, Hess 2, sw c ne 34-22-11e.

TEXAS

ANGELINA COUNTY — Pollock Oil Co., Lufkin, J. W. Sessions, 160, 1, J. D. la Garza sur, center.

BOWIE COUNTY—L. J. Timberlake, Texarkana, J. M. Tidwell, 22, 2, L. M. Rice sur, 150 ft from n and w lines. .

BROWN COUNTY—Young Bros. & Alexander, Inc., Fort Worth, W. M. Armstrong, 40, 1, S 151, P. Curlong sur, 750 ft from n and 150 ft from e line.

CALLAHAN COUNTY — Turkey-Creek Oil Co., Baird, C. C. Westerman, 100, 1, S 181, B 54, CCSL sur, 150 ft from w and 750 ft from n line. K. I. Floyd, 400, S. Glendale, Glendale, Calif., J. S. Hart, 40, 4, D&D No. 7 sur, 450 ft from s and w lines.

COLEMAN COUNTY — Condor Pet. Co., Abilene, J. D. Horne, 163, 1, S 56, A. S. Robinson sur, 330 ft from n and 1150 ft from e line. Arcadia Refg. Co., Coleman, W. Burkett, 84, 2, D. J. Holt No. 166 sur, 150 ft from n and e lines. Prairie O&G Co., Ranger, G. M. Gray, 43, 1, No. 177, M. Izod sur, 930 ft from n and 507 ft from e line.

CHAMBERS COUNTY—Humphreys Corp., Houston, E. H. Winfree, 10, 5, W. D. Smith sur, 50 ft from w and 854 ft from s line.

CHEROKEE COUNTY—Ben Banner, Fort Worth, A. S. Lacy, 80, 1, J. L. Hogg sur, 150 ft s of center of n line. Sinclair O&G Co., Fort Worth, T. McRae, 482, 1, Vallanova sur, 4989 ft from s and 330 ft from e line. C. T. Martin, 128, 1, L. Baker sur, 200 ft from n and 629 ft from w line.

For Tabulation and Comparison See Market Section

FORT BEND COUNTY — Telschow, Cady et al, Houston, Blakely, 5, 1, B 4, E. Drew sur, 150 ft from n and 75 ft from w line. Gulf Prod. Co., Houston, J. M. Moore, 29, M. Smith sur, 600 ft nw of No. 25.

FISHER COUNTY — Texas Co., Wichita Falls, T. A. Jean, 460, 1, S 201, B 1, BBB&C sur, 380 ft e and 400 ft from s line sec.

GREGG COUNTY—Republic Prod. Co., Houston, C. Fisher, 50, 1, J. Ruddle sur, 200 ft from n and 265 ft from e line. Sinclair O&G Co., Fort Worth, M. T. Cade, 640, 1, No. 110 S. Brooks sur, 2640 ft from n and 2742 ft from w line. C. C. Julian Oil & Royalty Co., Oklahoma City. J. M. England, 32, 1, M. Van Winkle sur, 150 ft from n and w lines. Foree & Shasta Oil Co., Longview, A. Christian, 31, 1, H. Hathaway sur, 415 ft from w and 161 ft from s line. T. D. Humphrey, Wichita Falls, A. F. McAfee, 40, 1, Wm. Engle sur, 150 ft from s and w lines. Mid-Kansas O&G Co., Shreveport, M. G. Barton, 193, 1, S. P. Hollingworth sur, 150 ft from n and w lines. H. S. Moss et al, Dallas, G. B. Tenery, 10, 1, Wm. Robinson sur, 156 ft from n and 150 ft from w line. Cranfill & Reynolds, Houston, G. E. McGrede, 16, 1, D. Sanchez sur, 150 ft from n and w lines. Danciger O&R Co., Fort Worth. C. C. Clemons, 28, 1, D. Sanchez sur, 150 ft from s and e lines. Arkansas Fuel Oil Co., Shreveport, W. L. Hestand, 32, 1, D. Sanchez sur, 150 ft from n and e lines. Yount-Lee Oil Co., Beaumont, Lathrop, B1, Wm. Robinson sur, 3240 ft from w and 4410 ft from n line sur; B2, 4620 ft from w and 4400 ft from n line sur. McKinley A1, Wm. Robinson sur, 3610 ft from w and 810 ft from n line sur. S. K. Vierson, Okmulgee, Okla., G. M. Muckleroy, 30, 1, J. S. Caruthers sur, 160 ft from n and 566 ft from e line.

GARZA COUNTY — Garza Dev. Co., Lubbock, J. Justice, 435, 1, S 25, B 6, H&GN sur center of se¼.

GRAY COUNTY—Texas Co., Wichita Falls, J. M. Patton, 155, 5. S 61, B B2, H&GN sur, 330 ft from s and 2136 ft from w line.

GUADALUPE COUNTY — Magnolia Pet. Dallas, M. T. Klein, 100, 8, J. W. Robinson sur, 300 ft se of No. 1.

HARRIS COUNTY — Rio Bravo Oil Co., Houston, J. J. Settegast, A, 124, A21, J. Kopman sur, 200 ft from e and 400 ft from n line. Karsen & Kendall, Houston, C. T. Stewart, 112, 2, W. D. C. Hall sur, se corner. Sun Oil Co., Houston, E. L. Bender, 2000, 23, W. B. Adams sur, 300 ft nw of No. 21; 22, 298 ft from ne and 363 ft from nw line blk. 2. M. O'Connor, 1, 1, W .B. Adams sur, 75 ft from s and w lines.

HARDIN COUNTY — Rio Bravo Oil Co., Houston, Fee, 158, C113A, J. F. Cotton sur, 210 ft w and 120 ft n of No. 111A.

HUTCHINSON COUNTY—Henry Stillkall Oil Prod., Tulsa, J. A. Whittenburg, 160, 4, S 89, B. Z. GC&SF sur, 990 ft from n and 330 ft from e line sec.

JONES COUNTY—Ungren & Frazier et al, Abilene, S. W. King, 40, 1, No. 197, M. Bueno sur, 160 ft from n and e lines. S. C. Yingling, Fort Worth, Coates, 80, 1, S 17, B 19, T&P sur, 330 ft from n and e line e½ sw¼.

JIM WELLS COUNTY — Gulf Prod. Co., Houston, R. Shaeffer, 40, 3, J. T. White sur, center of sur.

LIBERTY COUNTY—Gulf Prod. Co., Houston, E. W. Boyt, 618, 13, A. Allen No. 22 sur, 500 ft n of No. 11.

LOVING COUNTY—Richmond Drilling Co., Texon, Wheat, 10, 1, S 80, B 1, W&NW sur, center. Lockhart & Co., Pecos, Hubbard 1, S 84, B 33, H&TC sur, 4290 ft from ne and 660 ft from se line.

MARION COUNTY—Edna Oil Co., Tulsa, C. A. DeWare, 110, 1, South Hazlewood sur, 150 ft from n and 1507 ft from w line. Sinclair O&G Co., Fort Worth, D. R. Coulter, 150, 1, Wm. Russell sur, 433 ft from e and 195 ft from s line.

MILAM COUNTY—Dil-Tex Oil Corp., Dallas, W. D. Dulbeck, 137, 1, Rodriquez sur, 450 ft from n and e lines.

NAVARRO COUNTY—Lee & Dotson, Dallas, M. J. Williamson, 50, 1, Jno. McNeal sur, 150 ft from n and e lines.

PALO PINTO COUNTY—Lloyd Oil Corp., Fort Worth, S. E. Connor, 40, 1, 2665, TE&L sur, 2100 ft from n and 635 ft from w line.

PECOS COUNTY — W. B. Hanagan, San Angelo, Shearer, 80, 1, S 45, B 10, 660 ft from s and e lines of sec. Whitaker & Callaway, Fort Stockton, C. J. Devlin, 160, 1, S 69, P. Hernandez sur, 150 ft from n and e lines.

RUSK COUNTY—D. S. Brooks, El Dorado, Ark., E. B. Alford, 100, 1, Jas. Reel sur, 1000 ft from e and 200 ft from s line sur. Roeser & Pendleton, Inc., Fort Worth, G. Pool, 31, 1, M. J. Pru sur, 200 ft from s and w lines. Muldoon O&G Co., San Antonio, E. B. Alford, 10, 1, I. G. Parker sur, 150 ft from n and e lines. Danciger O&R Co., Fort Worth, N. Bean, 20, 1, I. Ruddle sur, 300 ft s of No. 2; 2, 530 ft s of No. 3; 3, 150 ft from n and w lines. A. J. Deason, 10, 1, M. J. Pru sur, 150 ft from n and w lines. Cranfill & Reynolds, Houston, G. Thompson, 10, 1, R. E. Winn sur, 150 ft from n and e lines. Anderson & Co., Inc., Fort Worth, A. Thrash, 17, 2, M. J. Pru sur, 250 ft from s and 150 ft from e line. Federated Oil Co., Wichita Falls, W. M. Camp, 15, 3, J. Ximinez sur, 200 ft from n and e lines. Sun Oil Co., Dallas, E. S. Barker, 77, 2, A. M. Ryan sur, 250 ft from n and 240 ft from e line. Crump & Hanagan, Midland, D. Caldwell, 77, 2, I. Ruddle sur, 285 ft from w and 224 ft from s line; 1, 2121 ft from e and 160 ft from s line. Tidal Oil Co., Fort Worth, J. M. Finney, 40, 3, J. Ximinez sur, 150 ft from s and w lines. Weaver-Crim Corp., Longview, B. Laird, 82, 1, W. P. Chisum sur, 150 ft from s and w lines. D. Ladd, 45, 1, H. Hobson sur, 210 ft from w and 455 ft from s line; 2, 455 ft from n and 150 ft from w line; 3, 522 ft from w and 153 ft from s line. H. W. Elliott, Fort Worth, M. R. Terrell, 5, 1, A. M. Ryan sur, 150 ft from n and e lines. A. J. Deason, 5, 1, J. Ximinez sur, 150 ft from n and e lines. Burton Drilling Co., Longview, E. B. S. Florey, 50, 2, P. W. Holmes sur, 751 ft n of No. 1. Houston Prod. Co., Houston, W. P. Brightwell, 18, 1, E. G. Sevier sur, 150 ft from n and e lines. Marine Corp., Dallas, N. B. Bean, 50, 3, I. Ruddle sur, 150 ft from n and 250 ft from e line. Jones & Houston Oil Co., Houston, J. M. Crim, 16, B3, H. Hobson sur, 336 ft e of No. 1. D. M. Peterson, 10, B1, I. Ruddle sur, 150 ft from n and w lines. S. B. Wills, 41, 1, Wm. Chisum sur, 248 ft from n and 293 ft from w line; 2, 249 ft from n and 150 ft from e line. Pat Armstrong, Longview, E. Cooper, 3, 1, I. Parker sur, 175 ft from n and e lines. Sun Oil Co., Dallas, S. A. Selman, 67, 2, M. J. Pru sur, 150 ft from n and w lines. Roeser & Pendleton, Fort Worth, R. Pool, 65, 1, F. Cordova sur, 200 ft from s and e lines. Humble O&R Co., Houston, Mrs. L. D. Crim, 628, 13, E. G. Sevier sur, 199 ft from w and 305 ft from s line. Kemper Kimberlin, Tyler, A. Thrash ¾ 1, J. Ximinez sur, 150 ft from s and e lines. Republic Prod. Co., Houston, T. E. Haynes, 11, 1 R. W. Smith sur, 166 ft from n & e lines. Shaw Oil Co., Wichita Falls, Ashby 1/3, 3, J. Ximinez sur, 150 ft from e and 173 ft from n line. J. W. Olvey, El Dorado, Ark., L. D. Crim, 20, 3, R. E. Winn sur, 210 ft from w and 165 ft from s line. Humble O&R Co., Houston S. S. Laird, 230, A3, I. Ruddle sur, 150 ft from n and e lines. S. S. Laird, 347, B2, M. Van Winkle sur, 150 ft from n and 3388 ft from e line. L. D. Crim, 564, 16, E. G. Sevier sur, 196 ft from s and 5472 ft from e line. Burton Drilling Co., Longview, G. Thompson, 20, 2, R. E. Winn sur, 180 ft from w and 150 ft from n line. Mag.

nolia Pet. Co., Dallas, E. Florey, 50, 2, P. W. Holmes sur, 240 ft from e and 150 ft from s line. Navarro Oil Co., Houston, R. N. Brightwell, 107, 2, Winn-Y'Barbo sur, 150 ft from s and w lines. McMahon, McCulloch & British-American Oil Prod. Co., Tulsa, D. Wills, 56, 1, W. P. Chisum sur, 191 ft from s and w lines. N. W. Hunter, Tyler, J. P. Buntyn, 17, 1, J. C. Snow sur, 150 ft from n and e lines; 2, 150 ft from n and w lines. Westheimer & Daube, Ardmore, D. Peterson, 40, 2, I. Ruddle sur, 1128 ft from n and 150 ft from e line; 3, 150 ft from n and w lines. H. L. Hunt, Henderson, C. Young, 126, 2, M. J. Pru sur, 150 ft from n and e lines. Mid-Kansas O&G Co., Shreveport, J. R. Beall, 80, 1, W. P. Chisum sur, 200 ft from s and e lines. S. H. Moores, 200, 2, M. J. Pru sur, 150 ft from n and 1518 ft from e line. British American Oil Prod. Co., Tulsa, A. Thompson, 25, 1, R. E. Winn sur, 150 ft from n and w lines; 3, 150 ft from s and e lines. C. G. Thornton, Henderson, E. B. Alford, 3, 1, I. G. Parker sur, 180 ft from e and 140 ft from s line. Cranfill & Reynolds Oil Co., Houston, F. J. Cox, 15, 1, R. H. Penney sur, 227 ft from n and 184 ft from w line. J. W. Keeling, 12, 1, F. W. Cordova sur, 150 ft from w and 182 ft from s line. J. G. Mc Elroy, 9, 1, F. W. Cordova sur, 258 ft from w and 200 ft from s line. Jones Bros. & Shasta Oil Co., Longview, R. Pool, 10, 2, M. J. Pru sur, 204 ft from n and 260 ft from e line. Petroleum Marketing Corp., Houston, J. E. Arnold, 9½, 2, M. J. Pru sur, 150 ft from s and w lines; 3, 669 ft n of No. 2; 4, 669 ft n of No. 3. Tidal Oil Co., Fort Worth, J. M. Finney, 40, 2, J. Ximinez sur, 150 ft from n and w lines. M. R. Terrell, 49, 1, Seiver sur, 250 ft from w and 422 ft from s line; 2, 250 ft from e and 422 ft from s line. Ward Oil Corp., Ardmore, Giles No. 2, 41, 2, M. J. Pru sur, 150 ft from s and e lines. J. M. Finney, 43, 1, F. Cordova sur, 150 ft from s and e lines. Humble O&R Co., Houston S. S. Laird, 127, B1, J. Lewis sur, 955 ft from s and 551 ft from w line. Thomason & Fitzsimmons, Shreveport, J. R. Irion, 73, 1, M. J. Pru sur, 150 ft from n and e lines. Federated Oil Co., Wichita Falls, Mayfield-Alford, 16, 3, J. Ximinez sur, 200 ft from n and e lines. Gulf Prod. Co., Houston, R. M. Griffin, 65, 5, I. Ruddle sur, 150 ft from s and w lines; 6, 150 ft s of center of n line. R. N. Brightwell, 50, 3, E. E. Winn sur, 150 ft from s and e lines. M. E. Peterson, 92, 4, I. Ruddle sur, 150 ft from n and e lines; 5, 340 ft s of No. 3.

ROBERTS COUNTY — Frank Traves, Miami, J. J. Cunningham, 640, 1, S 74, B M2, H&GN sur, 1853 ft from w and 2134 ft from s line.

REEVES COUNTY — Humble O&R Co., Houston, Balmorhea, 640, 1, S 33, B 5, H&GN sur, center of nw¼.

SAN PATRICIO COUNTY—Saxet Oil Co., Houston, White Point Dev. Co., 356, 4, Bell-Seguin sur, 1575 ft from e and 151 ft from s line.

SHACKLEFORD COUNTY—H. & H. Drilling Co., Seminole, Okla., E. Webb, 11, 4, S 1, Blind sur, 150 ft from n and w lines. Kiser & Fleming, Albany, P. K. Clark 16, 2, S 2, Blind Asy sur, 150 ft sw of center of ne line.

SMITH COUNTY—Ruffin Kilgore Oil Co., Inc., Longview, H. Florence, 70, 1, B. Clark sur, 1000 ft from n and 600 ft from e line.

THROCKMORTON COUNTY—Cox & Henderson Oil Co., D. McKeichan, 224, 1, B 2, Comanche Res. sur, 150 ft from ne and 2022 ft from nw line.

TERRELL COUNTY—Leonard Jones, Sheffield, Peckenham, 64, 1, S 43, B B2 sur, 200 ft from s and e lines of nw¼.

UPSHUR COUNTY—Gulf Prod. Co., Fort Worth, J. T. McElroy, 640, 93, S 193, B F, 990 ft from n and 330 ft from w line sec.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, E. York, 188, 6, J. Walling sur, 250 ft from s and 200 ft from e line. A. G. Maxfield, 107, 3, N. C. S. L. sur, 250 ft from n and e lines. M. F. Shirley, 38, 4, J. Walling sur, 90 ft from s and 741 ft from w line. L. M. Brawner, 147, 2, J. Walling sur, 250 ft from s and e lines. M. P. Neill, 100, 4, Jas. Rose sur, 225 ft from n and 581 ft from w line. J. C. Stewart, 16, 3, J. Walling sur, 150 ft from e and 375 ft from s line. J. R. Shivers, 46, 2, J. Walling sur, 200 ft from n and w lines. R. V. White, 35, 3, N. C. S. L. sur, 250 ft from n and w lines.

WICHITA COUNTY—Mid-Continent Holding Corp., Wichita Falls, Burnside, 38, 9, J. M. Sharp sur, 450 ft from e and 150 ft from s line.

WARD COUNTY — Gulf Prod. Co., Fort Worth, G. W. O'Brien, 640, 17, S 17, B F, GM&MBA sur, 330 ft from n and 990 ft from e line sec.

WILBARGER COUNTY — Queen Oil Co., Wichita Falls, Harrold, 267, 17, S 25, B 13, H&TC sur, 180 ft from s and 2135 ft from w line. Waggoner Refg. Co., Electra, W. T. Waggoner, 1, S 9, B 1, H&TC sur, 1200 ft from ne and 2000 from nw line.

COMPLETIONS

(*Continued from page* 85)

SOUTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BEE COUNTY—		
United Prod. Co.'s Ray 35	480	3966
CALDWELL COUNTY—		
Mills and Chapman's McMahon 2	¶2-9	976
DUVAL COUNTY—		
Breeding, Frasher et al's Bishop Cattle Co. 2	1200	2373
JIM HOGG COUNTY—		
A. J. Kolling's Jones 1	*	2844
JIM WELLS COUNTY—		
Carsil O&G Co.'s McGill 1	*	2683
R. H. Ewell's Doering 1	*	3450
NUECES COUNTY—		
Bess et al's Booery 1	¶20	4050
Moody-Seagraves Sedwick 1	100	4097
REFUGIO COUNTY—		
United Prod. Co.'s O'Brien 10	700	6456
Pearson Properties, Inc.'s, Ryals 4	300	6450
Moody-Seagraves' Mercy Academy 2	50	6417
STARR COUNTY—		
Kush & Duerkson's Kelsey Bass 1	*	856
Los Olmas Oil Co.'s Kelsey Bass 2	*	910
ZAPATA COUNTY—		
Allied O&G Co.'s & Allen & Morris, Gutierrez 12	*	100
O. W. Killam's Cuellar 42-B	100	1576
Mid West Public Utilities Co.'s M. P. De Garza 1	*	1580

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BARBERS HILL—		
Mills Bennett Prod. Co., Gulf Fisher 2	900	5245
Sun Oil Co., McKinney Fee 4	*	6477
Chambers Co. 8	800	4521
The Texas Co., Williams 1	*	6965
MOSS BLUFF—		
Texas Gulf Sulphur Co., Munger 1	*	1107
PIERCE JUNCTION—		
Warner-Quinlan, Minchen 2	600	4486
RACCOON BEND—		
Humble O&R Co., Paine 12	200	3555
SAN JACINTO COUNTY—		
Arkansas Fuel Oil Co., McMurray 1	*	4050

EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
GREGG COUNTY—		
Arkansas Fuel Oil Co., P. D. Harrison 1	18,000	3560
F. K. Lathrop 1-C	12,000	3678
Alco Royalty Corp., Castleberry 1	*	3519
Daniel & T. C. Patten, L. C. Dudley 1	*	3530
Roeser-Pendleton, Inc., et al, B. E. Rodden 2	7500	3581
Selby Oil & Gas Co., P. J. Snavely 1	20,000	3583
Jim Rush-G. E. Hubbard-Simms Oil Co., Tenery 1	10,000	3590
Sultan Oil Co., S. F. Thrasher 1	15,000	3564
Tidal Oil Co., F. K. Lathrop 1	3000	3656
Tidal-J. K. Wadley & Jim Evans, Castleberry 1	*	3614
RUSK COUNTY—		
Geo. S. Anderson-Cox et al, Wm. Jobe 2	2600	3710
C. P. Oil Co. (Roy I. Carter) A. Thrash 1	3000	3721
Cordova Union Oil Corp. et al, Christian 3	7500	3716
Cranfill-Reynolds Co., C. Young 1	3300	3721
Frank R. Foster-Little et al, M. Alford 2	720	3700
Gulf Prod. Co., Fred Birdsong 1	20,000	3661
C. M. Griffin 1	20,000	3706
W. B. Hamilton-Consolidated Oil Co-Jenkins & Trico Oil Co., Camp 3	1100	3700
Camp 4	600	3680
Hicks Drlg. Co., J. N. Peterson 1	20,000	3727
Houston Oil Co., W. R. Crim (16-ac) 1	12,000	3765
Humble O&R Co., L. D. Crim 10	10,000	3777
L. D. Crim 11	12,000	3783
L. D. Crim 12	7500	3755
Ben F. Laird 2	10,000	3664
S. S. Laird 1-A	10,000	3718
J. N. Peterson 5	6000	3780
H. L. Hunt & Graddy H. Vaughn, C. Young 1	3000	3723
Jones Drilling Co. et al, Thrash 1	2500	3755
K. & M. Oil Co., Toliver 1	2000	3740
Leonard Pet. Co., M. Alford 1	1500	3654
Lewis Prod. Co., M. Peterson 1	15,000	3610
Magnolia Pet. Co., E. B. S. Florey 1	16,000	3667
Della Crim 3-A	12,000	3673
Marine Corp. et al, Nat Bean 1	12,000	3657
Merrick Drlg. Co. et al, Thrash 1	2500	3729
Moody-Seagraves Prod. Co., Thrash 2	2600	3702
Olsan Bros. et al, J. T. Brown 4	3250	3724
Peery-Woody & C. W. Boller, Thrash 1	4600	3690
Thrash 2	4650	3686
Shasta Oil Co., Ras Pool 1	3700	3749
Bert Shaw Oil Co. et al, Ashby 3	2400	3695
Sinclair O&G Co., D. Bradford 1	1000	3710
W. W. Holland 8	1200	3700
H. R. Smith-Houston Oil Co., E. N. Peterson 2	7500	3736
Snetcher & Pittman, Cox 1	8500	3711
Stanolind O&G Co., Ben Laird 2	10,000	3767
Turman Oil Co., Deason 3	2300	3709
Calvin Young 1	3000	3700
Ward Oil Corp.-J. R. Elliott & Johnston Bros., E. S. Thrash 1	25,000	3803
VAN ZANDT COUNTY—		
Pure Oil Co., B. E. Crim (40-ac) 2	*	3012
H. C. Gilbert (62-ac) 2	5000	2975
A. F. Magers (72½-ac) 2	¶2	2927
F. B. Smith (80-ac) 5	6000	2921

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Hedrick-Camp Drlg. Co., C. E. Pruitt 1	20	748
Dr. C. W. Wallace et al, K&K 2	*	1918
K&K 5-C	*	1911
GRAYSON COUNTY—		
F-H-E Oil Co., Conn 1	*	1095
MONTAGUE COUNTY—		
John B. Jamerson et al, W. J. McInnis 1	*	2504
WICHITA COUNTY—		
Tedford Bros. et al, Foster 1	*	960
The Texas Co., Waggoner 398	*	1005
NORTH YOUNG COUNTY—		
Ard & Rathke, Belknap 1	*	915
F. P. Hynes et al, Casey 1	*	720
Putnam Oil Co., Choate 1	*	670
O. L. Swanson et al, Humphrey 1	*	957
The Texas Co., Drum 1	*	701
R. J. Watson et al, A. C. Watson 1-B	*	806
SOUTH YOUNG COUNTY—		
Christie Bros. et al, McLaren 1	35	2642

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CRANE COUNTY—		
Continental Oil Co.-Frank Zoch, Cowden 2-B	600	2490
PECOS COUNTY—		
Cardinal Oil Co., Tippett-Kirby 5-E	325	478
Corvette Oil Corp., Monroe 1	350	466
McCarty Oil Co., Gray 3	20	1437
UPTON COUNTY—		
Gulf Prod. Co., J. T. McElroy 92	305	2997
WARD COUNTY—		
Paul Ryan et al, Allen 1	15	2244

Wildcat Reports From All Sections

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH (Bellevue)—		
H. I. Morgan et al, Kendricks B-13, 22-19-11	¶30	1764
CADDO PARISH—		
Ralph Davidson et al, F. Weiller 1, 33-17-13	*	2564
SABINE PARISH (Zwolle)—		
Lacey Prod. Co., Cooper 3, 30-8-11	*	2365
Trans-America Oil Co., Carter 1, 36-8-12	*	2540
W. M. Coates, Sabine Lbr. Co. 2, 1-7-12	*	2600

BIENVILLE PARISH—Jamestown Synd.'s Lawhon 1, sw ne 15-16-8w, show gas in sandy shale (Tokio) cemtd 6-inch cas 2845 ft, fsh cas, td 2854 ft.

BOSSIER PARISH—Andrews & Davlin's Nattin 1, 15-22-14, dry 2062-67 ft, arr ds test, td 2700 ft. H. I. Morgan et al's Kendricks B-13, ne sw 22-19-11, 10-inch 176 ft, 6⅝ 1725 ft, making est 30 mil ft dry gas, td 1764 ft. Trinity test (second hole). Rambaugh et al's Allison 1, 10-19-13, sd 1100 ft. Flint River Oil Co.'s C. L. DeMoss 1, 22-22-13, dk and mov in rig (formerly carried Walker et al's Thompson 1).

CADDO PARISH—United Gas Pub. Serv. Corp.'s Emmons 1, ne sw 27-23-16, 12½ cas 363 ft, 9-inch 3635 ft, cemtd 6⅝ cas 5396 ft; Fortner 1, nwc frac sec 5-22-16, 5-inch cas 5430 ft, td 5435 ft. Gordon M. Garry's Hatcher 1, nw ne 11-17-15, lcn (5500 ft test planned). Ralph Davidson et al's F. Weiller 1, 33-17-13, 10-inch 40 ft, base Blossom 1997 ft, tested hot sw 2440-47 ft, dry abn, td 2564 ft. Pelican Nat. Gas Co.'s Cooper 1, 29-18-14, sp 15½ cas 200 ft (5500 ft test).

CATAHOULA PARISH—National Drilling Co.'s Marsh McMillian 1, 26-9-6e, 6⅝ cas 2796 ft, tested sw, sd 3097 ft.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-2e, dr limestone 2761 ft. Carter Bell et al's Taylor 1, 42-14-4e, rig.

CLAIBORNE PARISH—Baird Bros. et al's Whittaker 1, 30-20-7w, tested sw in ds test 2956 ft, arr deepen.

CONCORDIA PARISH—United Gas Pub. Serv. Corp.'s Miller & Smith 1, 33-8-9e, sp 12½ cas 159 ft, dr 900 ft. Joe Marr et al's Maxwell 1, 38-3-8e, sd 3622 ft.

DE SOTO PARISH—W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd 2350 ft. Neff et al's Ramsey 1, 33-13-16, 12½ cas 80 ft, bit lost in hole, sd 3000 ft. E. T. Oakes' Johnson 1, 30-13-15, bldg 120 ft dk (formerly carried Bryant 1).

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, dry show oil in bro sand and shale 1256-69 ft, blg to test 1380 ft. W. M. Coates et al's Collins 1, sw nw ne 28-9-10, base Midway chalk 2612 ft, base hd lime 4039 ft, tested 15 joints mud and sw 4020-91 ft, td 4091 ft. J. W. Cooper et al's Cooper 1, 35-11-10, sd 3156 ft; Cooper 2-A, 35-11-10, top chalk 1400 ft, sd 1515 ft.

RED RIVER PARISH — Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, junk in hole, ta 3010 ft.

SABINE PARISH—J. C. Walton's Sabine 1, ne nw 11-7-12, 6⅝ cas 2119 ft, dry slight show oil 2327 ft, fsh 2½-inch ds, td 2361 ft. Lacey Prod. Co.'s Cooper 1, 30-8-11, top chalk 2306 ft, 6⅝ cas 2270 ft, hfo wosr, td 2620 ft; Cooper 3, sw ne 30-8-11, dry abn, td 2365 ft. Trans-America Oil Co.'s Carter 1, 36-8-12, top marl 2311 ft, 6-inch 2211 ft, did not pump, abn as dry, showed some oil, td 2540 ft. Jean Longoria's Belton 1, 31-9-13, sd 1400 ft. Triangle Pet. Co.'s Sabine 2, 36-8-12, dk. D. M. Lide's Ponder 1, 15-7-11, hfo, wosr, td 2800 ft; Ponder 2, ne nw 15-7-11, 6⅝ 2364 ft, show oil 2420 ft, sd wo. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-inch 103 ft, 6⅝ 2310 ft. H. W. Perritt's Bowman-Hicks 3, 2-7-12, 6⅝ cas 2206 ft hole full fluid, wosr, td 2293 ft; Bowman-Hicks 4, se ne 2-7-12, lcn; Boring 1, ne nw 11-7-12, sp 10-inch 85 ft, dr 900 ft. A. H. Thomas' Edwards Est 1, ne se 8-8-13, rig. R. L. Gay, Tr.'s, Long-Bell Lbr. Co. A-1, ne nw 10-8-13, 12½ cas 105 ft, dr 830 ft. Jordan & Co., Inc.'s, La. Long Leaf 1, sw se 3-7-11, 10-inch 100 ft, cemtd 6-inch cas 2352 ft. Gautier et al's Meshell 1, se nw 30-8-12, sd 1230 ft (second hole). Ohio Oil Co.'s Bowman-Hicks 8, nw ne 2-7-12, rig; Bowman-Hicks 9, nw se 35-8-12, lcn; Bowman-Hicks 10, sw ne 35-8-12, lcn; Bowman-Hicks 11, sw ne 2-7-12, lcn. Durham Oil Co.'s Polly 1, sw ne 18-8-12, 10-in 105 ft, 8¼ cas 2087 ft, base chalk 2595 ft, dr 2620 ft. Packard Oil Co.'s Davis 1, sw sw 8-7-10, elev 337 ft, 10-inch 80 ft, cemtd 6⅝ cas 2636 ft, top marl 2560 ft, td 2658 ft. W. M. Coates' Sabine 2, 2-7-12, 10-inch 100 ft, 6⅝ cas 2207 ft, dry abn, td 2600 ft; Sabine 3, 1-7-12, 10-inch 103 ft, dr 1700 ft. Sabine Royalties Co. Inc.'s Bill Hill 1, nw ne ne 5-7-11,10-inch 105 ft, top marl 2217 ft, cemtd 6-inch cas on bot 2230 ft; Skinner 1, se sw nw 5-8-11, lcn. Diffie & Barrett's Lites 1, 34-8-11, 10-inch 105 ft, sd. Natural Gas Prod. Co.'s Sabine 1, 1-7-12, lcn; Sabine 2, 1-7-12, sp 6⅝ cas 2382 ft. Hawkins et al's Byrd 1, 1-7-11, dk. Lyons & Neely's Baird Co. 1, 1-7-11, rig.

TENSAS PARISH—Seip et al's Fowler 1, 10-10-10e, co to deepen, td 905 ft. A. R. Willis' Curry 1, 39-11-12, fsh ds 3475 ft.

VERNON PARISH—Smith Weir et al's Delta L&T Co. 1, ne ne 14-2n-11w, sp 10-inch 525 ft.

WEBSTER PARISH—D. M. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, sd 160 ft. Red Hawk Oil Co.'s Matthews 1, se nw 11-23-9, top chalk 2480 ft, sd in lime 2518 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd— shut down; sdtr—sidetracking; sp—spudding; sr — straight raming; std — standardizing; sw — salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

LOUISIANA GULF GOAST

ASCENSION PARISH—Gulf's United Land Co. 19, prep to set screen 4874 ft. Triumph Oil Co.'s Lacey 2, stdg 4225 ft.

AVOYELLES PARISH — M. L. Vincent's Morrow 1, sd 4220 ft.

CALCASIEU PARISH — Wilfred Lahay's Jardell 1, 2 mi e Vinton, sd 3258 ft. Dr. Thomas et al's Hewitt 1, 2 mi e Edgerly field, lcn. Vacuum's State 7, dr 5200 ft shale; Miller 32, lcn. Union Sulphur Co.'s Moss 3, Lockport, dr 6470 ft shale. J. O. Davis' Industrial Lumber Co. 1, Starks, sd 6568 ft. Union Sulphur Co.'s Fee 762, Sulphur, dr 7040 ft salt; Fee 765, dr 2760 ft gumbo; Fee 766, set scr and tested salt water and oil, prep to dd 4200 ft. Freeport Oil Co.'s Vinton 3, lcn.

CAMERON PARISH — Freeport Sulphur Co.'s Gulf Land Co. 7, Black Bayou, lcn. Shell's Black Bayou State 2, dr 4720 ft salt. The Texas Co.'s State Calcasieu Lake 7, lcn. Vacuum's Cameron Meadows 2, dr 3000 ft shale. The Texas Co.'s State 8, E. Hackberry, dk. R. E. Seiss' Vincent 2, Hackberry, stdg 1290 ft. Magnolia's Sweet Lake 2, sd 4874 ft. Pure's Yount-Lee 10, dr 7140 ft shale.

IBERIA PARISH—Jefferson Lake Oil Co., Lake Peigneur 11, Jefferson Island, dr 850 ft lime.

IBERVILLE PARISH—Standard of La.'s Gay 1, Bayou Choctau, stdg 4175 ft; Baist 1, dr 3650 ft sand; Schwing 1-A, dr 6000 ft shale; Schwing 3, Bayou Blue, sd 2990 ft; Wilbert 9, dr 1225 ft gumbo; Case 2, t.a.

JEFFERSON DAVIS PARISH—A. V. Peters' Smith 1, dr 920 ft gumbo.

LA FOURCHE PARISH—The Texas Co.'s Leesville 2, dr 3540 ft shale.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, abn 2240 ft.

ST. LANDRY PARISH—The Texas Co.'s Botney Bay 9, Port Barre, testing sand 3399 ft.

ST. MARTIN PARISH—Humble's Woodward 1, Bayou Bouillon, dr 5930 ft sand; State 4, dr 4630 ft sand.

ST. TAMMANY PARISH—Washington and St. Tammany Dr. Co.'s Coussack 2, sd 2030 ft.

TANGIAPAHOE PARISH—Joan Dev. Co.'s Lake Superior Oil Co. 1, sd 3010 ft.

TERREBONNE PARISH—La. Gas & Fuel Co.'s Minor Estate 1, Houma, abn 6500 ft. The Texas Co.'s Bay St. Elaine 1, fsh 4750 ft; Caillou Island 4, ru; Four Isle 5, dr 550 ft cap rock; Lake Barre 8, dr 6780 ft rock; Lake Barre 10, lcn; Lake Barre 11, lcn; Lake Barre 12, lcn; Lake Barre 13, lcn; Lake Barre 14, lcn.

WEST FELICIANA PARISH — Putnam Synd.'s Como Plantation 2, dr 870 ft shale.

SOUTH TEXAS

ATASCOSA COUNTY—Bender and Cullen's Medina Irrigated Farms 1, sw corner of W. Klempcke sur No. 439, dr around 3000 ft.

BASTROP COUNTY—Turner, Wharton & Anderson's J. E. Harris 1, Joshua Gray sur, 3 miles n Dale pool, dr 2061 ft.

BEE COUNTY—Alexander et al's McFall 1, 3 miles s Skidmore, set 305 ft of 10-inch csg. Catlett & O'Neill's Miller 1, Ronald Hoskins sur, 8 miles w Beeville, dr 3315 ft, top of Jackson 3285 ft. Mineral Oil Co.'s (Mauldin & Fisher) A. J. Kimball 1, 300 ft s and 21 degrees e of Grayburg-Kimball test, Stephin Winship sur, 7 miles sw Pettus, set 6⅝-inch cas 3535 ft, wait on cement. Hicks et al's Billingsley 1, B. O. Hadley sur, one mile ne Grayburg-Kimball well, sand 3431 ft, test salt water. J. S. Mauldin's Mauldin 1, just southwest Pettus townsite, G. A. Kerr sur, still waiting on csg, td 3862 ft. E. S. Price's Weiss 2, 3½ miles se Pettus, sd 4552 ft. United Prod. Co.'s Ray 33, Geo. A. Kerr sur, between Pettus and discovery pools, dr 3212 ft; Ray 35, 1100 ft e Ray 34, T. Hanson sur, completed 480 bbls, 300 pounds working pressure on 3/4-inch choke, 6⅝-inch set 3957 ft, sand 3958-66 ft; Ray 36, T. Hanson sur, 1300 ft n production, sand 3930-40 ft, set 6⅝-inch csg 3928 ft, wait on cement.

BEXAR COUNTY—Russell and Moore's A. O. Mills 3, Navarro sur, 10 miles s San Antonio, sd 938 ft. J. Morgan Russell's Price Story 1, A. Navarro sur, 10 miles s San Antonio, dr 1060 ft in hard rock. Uchert et al's Palfrey 1, 7 miles se S. A., near Brooks field, coring 1803 ft in Edwards. Weilbacher and Brock's Ernest 1, 2 miles n Somerset, J. Christopher sur, sd 925 ft.

BLANCO COUNTY—Hardy Sitton's Standeford 1 (formerly Lisles and Adams) sur 155, abt 3½ miles nw Blanco City, to re-dr 952 ft; McMillen 1, 2 miles w Blanco City, sur 125, dr about 790 ft. Meeks et al's Walker 1, ne cor Noel Nixon sur No. 23, 4 miles n Blanco City, complete 4 month's fsh job, now dr 1038 ft. Forest Oil Co.'s (Rosenfield et al) Hohenberger 1, sur 94, no report.

BROOKS COUNTY—The Texas Co.'s Allen Land and Cattle Co. 1, 7110-acre San Antonito grant in Lassiter area, to make location. Ed East's Garcia 3, Las Mastena y Gonzalene grant, Lassiter area, prep to re dr at 960 ft. The Houston Oil Co.'s Holbein-Wormser 3, Palo Blanco de Maguellas Grant, near Palo Blanco Creek, sand 4502-07 ft, show little gas, deepened to 4515 ft in same sand, testing.

CALDWELL COUNTY — Harper et al's Strawn 1, near Litton Springs pool, topped Serpentine 1630 ft, now dr about 1655 ft. J. E. Mills and E. L. Chapman's McMahon 2, 50 ft due e of No. 1, 6 miles se Lockhart, completed 8,000,000 cu ft dry gas, 8¼-inch casing set 930 ft, total depth 976 ft. V. F. Neuhaus and Camp's J. B. Moore 1, William Clinton sur,

¾ mile nw Mills test, 6 miles s Lockhart, sd 2515 ft, top chalk reported at 2350 ft. Rayor et al's Dunlop 1,near Luling, dr 2132 ft,topped chalk 2092 ft.

DUVAL COUNTY—Breeding-Frasher et al's Bishop Cattle Co. 2, sur 135, S&O pool, completed 1200 bbls, sand 2320-28 ft, showed little oil, second sand 2365-73 ft heavily saturated, 6⅝-inch casing set 2320 ft, total depth 2373 ft. Humble Oil & Ref. Co.'s Kohler 50, sur 164, Kohler pool, dr 5888 ft. O'Byrne et al's Weil Bros. 1, 7 miles sw S&O pool, sur 568, repair boiler, total depth 1720 ft. Southern Oil Co.'s King Harper 2, sur 323, Cole area, lcn.

GOLIAD COUNTY—Gibson Oil Co.'s Parks 1, (wo), 5 miles ne Goliad, casing set abt 4320 ft, wait on cement. The Slick Estate's Reidel 1, 1830 ft sw Poetter discovery, testing sand 4230 ft, total depth 4275 ft.

GONZALES COUNTY—Linden Pet. Co.'s Cowley 1, dr 4390 ft, topped chalk at 4332 ft.

JIM HOGG COUNTY—Magnolia Pet. Co.'s Y. V. Cuellar 1, blk 92, W. A. Dannelly sub, sur 575, share 2, El Peyote Grant, dr 2937 ft. P. & M. Oil Co.'s (Peterman & Minahan) Palacios 1, 3 miles s and slightly e Randado field, blk 14, sur 231, sd 1100 ft. J. W. Pippin's N. Hinnant 1, blk 11, sur 147, lcn abn. A. J. Kolling's (J. D. Pulliam, Jr.) Jones 1, Holden sub, Diego Hinojosa Grant, temp abn 2844 ft. Gus Pape et al's Juan Benavides 1, blk 38, sub 1, Carpenter sub, Mesquite Grant, dr 100 ft.

JIM WELLS COUNTY—Blair and Son and Stewart's M. Perez 1, sec 9, blk 16, no report. Carsil O&G Co.'s McGill 1, Wm. D. Baldwin sur, 3 miles n of Armagosa, blew in as large gasser from 2683-89 ft, ran wild 36 hours, began spraying considerable salt water and test plugged; McGill 2, 900 ft due n No. 1, William D. Baldwin sur, ru. R. H. Ewell's Doering 1, blk 6, Seefeld Farm lots sub, sand 3450 ft, showed salt water, abn.

KARNES COUNTY—Karnes County Dev. Co.'s W. J. Hubbard 1, 3 miles w Kenedy, dr 1625 ft.

KENDALL COUNTY—Theo. Hicks et al's Speck and Wiedner 1, ¼ mile se center of Thomas Fowler sur No. 27, lcn. Perkins et al's Lawhorn 1, ne Boerne, new rig put over hole, re-dr, total depth 600 ft. Hardy Sitton's W. B. Garvin, dr at 1070 ft.

KERR COUNTY — Col. B. M. Hatridge's Townsite 1, blk 23, Westland Addn, in edge of Kerrville townsite, dr 465 ft, sand 225-35 ft, showed some oil. Evans and Gant's Jeff Love 2, sw corner sec 1593 ft, one-half mile se discovery well, lcn being made. Seiker and Mears 1, sw corner sec 1605, CCSD&RGNR Ry. sur, 2 miles ne Love test, dr 1315 ft.

LIVE OAK COUNTY — Burne-Greise Oil Co.'s George West 1, near Geo. West townsite, abt center James Vaughan sur, lcn. Houston Oil Co.'s Parr 1-A, ¾ mile s Brown Land & Cattle Co. 4, John McMillen Grant, dr 2635 ft; Brown Land and Cattle Co. 4, sw corner M. B. Kivlin sur, dr 5150 ft. Simmons Oil Co.'s Wedding 1, 2 miles n Three Rivers, sand 890 ft, showed salt water and gas, dr deeper.

NUECES COUNTY—Bess et al's Booery 1, three one-half miles nw Saxet field, completed abt 20,000,000 cu ft dry gas, shows 1425 lbs, pressure on tubing and 1525 lbs. on casing through ¼-inch choke, 4037 ft. Houston Oil Co.'s Ollie Purl 1-B, blk 7, R. Peters sur No. 2, Agua Dulce field, dr 6018 ft. Saxet Oil Co.'s Dunn 8, Saxet field, lcn. Moody-Seagraves Producing Co.'s Sedwick 1, 1200 ft n Houston-Hunter producer, completed for abt 100 bbls 4097 ft.

REAL COUNTY — Evans and Sprinkle's Marcus Auld 1, sec 15, blk D, HE&WT Ry. sur, 4 miles ne Love well, abn 4180 ft, sand 4105-80 ft, showed salt water; Haby 1, sec 175, AB&N sur, 7 miles sw Love well, dr 1395 ft. Gant and Kilgore and Eastland Oil Co.'s Dan Auld 1, sec 23, CCSD&RGNR Ry. sur, 3 miles sw Love test, dr 2200 ft.

SAN PATRICIO COUNTY—United Prod. Co.'s Cage 3, White Point field, sand 3494 ft, showed some oil. Saxet Oil Co.'s White Point Dev. Co. 4, White Point field, sand 4164-66 ft, showed gasoline, sand 4166-68 ft, showed oil.

STARR COUNTY — Kush and Duerkson's Kelsey Bass 1, blk 9, sub of Porcions 75-76-77, Jurisdiction of Camargo, abn 856 ft. Los Olmas Oil Co.'s Kelsey Bass 2, blk 6, sub of Porcions 75, 76, 77, Jurisdiction of Camargo, abn 910 ft; Kelsey Bass 3, blk 6, same Jurisdiction as No. 2, sand 392-400 ft, showed considerable oil, may develop into small producer, to clean out and put on pump. Willow O&G Co.'s Kelsey Bass 1, blk 8, sub of Porcions 75, 76, 77, Jurisdiction of Camargo, dr 420 ft. B. B. Tipps' Frank Doyno 1, lower tract No. 4, Porcion 81, dr 160 ft. Sacremento O&G Co.'s Seabury et al 1, sd 349 ft.

VICTORIA COUNTY — Lion Oil Refining Co.'s McFadden 3-A, Maria J. Traviesa sur, dr 2700 ft. Simpson-Fell Oil Co. & Westheimer et al's Levy 1, 10 miles s Victoria, 15 miles ne McFadden field, ru. T. B. Slick Estate's McFadden 1, ne Lion Oil Refining Co.'s gassers, 8000-acre block, dk. The Texas Co.'s McFadden 3, w of No. 2 wild gasser, lcn. United Production Co.'s McFadden 1-B, near Guadalupe river, dr 3825 ft, showed little gas in sand 3791-93 ft, drill stem test failed.

WEBB COUNTY—Cole Pet. Co.'s (Carson) Benavudes 4, sur 1601 ft, dr 850 ft. O. W. Killam's Killam 1, sur 1617 Reiser area, fsh for drill stem 2900 ft. George S. Marshall's C. W. Webster 3, sur 684, plugged back from 4280 ft and whipstock out at 2600 ft. Carolina Texas O&G Co.'s Barnsley 9, sur 268, blk 13, dr 800 ft.

ZAPATA COUNTY — Allied Oil and Gas Co. & Allen and Morris's Gutierrez 12, share 4, Fansler Partition, Comitas Grant, abn 100 ft. Benson Oil Co.'s S. Vela 1, blk 12, sur 259, sand 1040 ft, test gas and sulphur water, now dr 1156 ft. E. C. Brogan's Montemayor 1, 150 ft n line and 150 ft w line, blk 11, sur 64, ru. W. T. (Bill) Henry's Gopher Trust Estate 1, blk 10, sur 4, Fullerton sub of Share 8, Borrego Grant, sand 1326-32 ft, test little oil, ran tester second time, showed some gas, coring deeper. O. W. Killam's Bustamante 3, blk 7, share 5, Fansler Partition, Comitas Grant, coring 1440 ft; Cuellar 40-C, sur 278, dk; Cuellar 42-B, completed 100 bbls 1569-76 ft. Lowe and Rogers' P. Benavides 2, blk 13, sur 613, ru. Mid West Public Utilities Co.'s M. P. de Garza 1, blk 33, M. P. De Garza lands, Pedernal Grant, abn 1580 ft. P. H. Meyers' I. G. Trevino 1, blk 24, sur 412, sand 1520 ft, test salt water. National Oil Co.'s Luther et al, blk 97, dr Pron sub, Porcion 6, sd 590 ft. Nielsen and Coursey's Luther et al 1, blk 11, sec 5, Fullerton Farms sub, Share 8, Borrego grant, sd 1148 ft. Nordan and Morris's Jose Bustamante 1, share 34, Fansler Partition, Comitas Grant, dr 50 ft. J. I. Newton's I. G. Trevino 3, blk 7, sur 66, lcn. O. & A. Company's Garcia 3, share 3, Fansler Partition, Comitas Grant, dr 1000 ft. John Pappas Pool, Inc.'s, Flores 1, Porcion 35, location temp abn. Penny Prod. Co.'s Juan V. Cuellar 1, blk 1, sur 2, Pappas sub, Porcion 33 and 34, fsh 2032 ft. W. R. Shankle's Garza 3, blk 10, sub of Zorro ranch, Comitas Grant, set casing 1370 ft, wait on cement. Talmadge and Mackenzie's G. F. Trevino 1, blk 6, sur 4, Marts and Beavens sub of Porcion 2 and 3, sd 517 ft.

CENTRAL EAST TEXAS

Completions

CASS COUNTY—
J. E. Smitherman etal, A. S. Fell 1.. * 3783

DELTA COUNTY—
Everetts Drlg. Co. et al, M. Sansing 1 . . . . . * 3335

BOWIE COUNTY—Mayfield Oil Royalties & Devore's R. B. Cooper 1, W. M. Ward sur, elev 360 ft, dr 1035 ft. Parkington & Jones et al's W. W. Whybark 1, J. H. Dyer sur, dk. W. A. Swift-G. W. Hindman & Tom Ball's Roy Merritt 1, Y. S. McKinney sur, dr 1560 ft. Lee J. Timberlake et al's J. M. Tidwell 2, L. M. Rice sur, elev 290 ft, Annona chalk 1305-1805 ft, dr 2400 ft.

CASS COUNTY—S. D. Hunter et al's M. Felkner 1, J. L. Chambers sur, elev 248 ft, top Pecan chalk 2373 ft, dr 2750 ft. C. E. Murdock et al's G. W. Coody-First Nat'l Bank 1, Evans Watson sur, elev 401 ft, Pecan chalk 2522-2953 ft, dr 3145 ft. Olds-Smith et al's Joe Athenay 1, J. C. Byers sur, dr 1640 ft. Pigg & Davis' Ray Bryan 1, Albert Latimer sur, cemt cas 90 ft. John C. Rogers et al's W. Q. Henderson 1, Wm. Davis sur, elev 354 ft, sd 955 ft; Lanier 1, K. A. Welborn sur, elev 366 ft, sd 1920 ft. Smith-Adkisson et al's Wilson 1, J. A. McFarland sur, rig.

CHEROKEE COUNTY—Ben Banner et al's A. S. Lacy (80-ac) 1, J. L. Hogg sur, lcn. D. H. Byrd et al's Fariss 2, elev 215 ft, dr shale 3560 ft. W. G. Gray et al's H. Kyle 1, Jas. McClain sur, lcn. Helen Clair Oil Co.'s Mrs. M. B. Perkins (200-ac) 1, Thos Sanford sur, dk. O. W. Killam et al (was McDonald Bros. et al's) W. A. Newton 1, Thos. Quevedo sur, sp. Rowan-Nichols Oil Co.'s Ousley 1, T. L. Smith sur, cemt cas 180 ft. Wm. A. Stone et al's E. M. Decker 1, Geo. Ruddle League, dr 3230 ft. Sinclair O&G Co.'s Martin 1, Larkin Baker sur, rigged up and sd; J. R. McRae 1, F. J. Ballnova sur, dr 1800 ft. Walton Oil Co. (was Lee et al's) E. Singletary 1, Tillman Waters sur, rig.

DELTA COUNTY—The Delta Dev. Co.'s M. Neatherly (26-ac) 2, J. B. Alexander sur, testing 2765 ft. D. S. Hoad et al's J. J. Baker 1, R. Carson sur, elev 437 ft, sd 1550 ft. Worthington-Stedham et al's W. H. Dejernett 1, E. Chick sur, elev 492 ft, sd 1925 ft.

FRANKLIN COUNTY — Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, dr 2880 ft.

LAMAR COUNTY—K. O. Bundy et al's G. S. Legate 1, J. V. Cheney sur, rig. Everetts & Allen's J. A. Guest 1, Luke Roberts sur, sd 2200 ft. Puritan Oil Co.'s Geo. Parr 1, R. Russell sur, dk.

LEON COUNTY—Sun Oil Co.'s Ella Grayson 1, Marquette Blk., dr sandy shale 3095 ft.

NACOGDOCHES COUNTY — Benedum & Trees' Conkrite 1, Chireno sur, dr 1500 ft shale. C. M. Bowie's Miller 1, Strode sur, ru. J. F. Burke et al's Pattison 1, sd 4270 ft. Fain & McGaha's Pirtle 1, Edward sur, lcn. Matthew Foreman's Mattauer 1, Chireno sur, dk. Scully & Harwell's Driver 1, Torres sur, dr 650 ft, set 10-inch csg. Sequoia Oil Co.'s Boyd Estate 1, Olvier Sur, ru. John Starks et al's Langford 1, Cason sur, coring Austin Chalk 3650 ft. W. W. Wheeler's Parmalee 1, Kirby sur, sd

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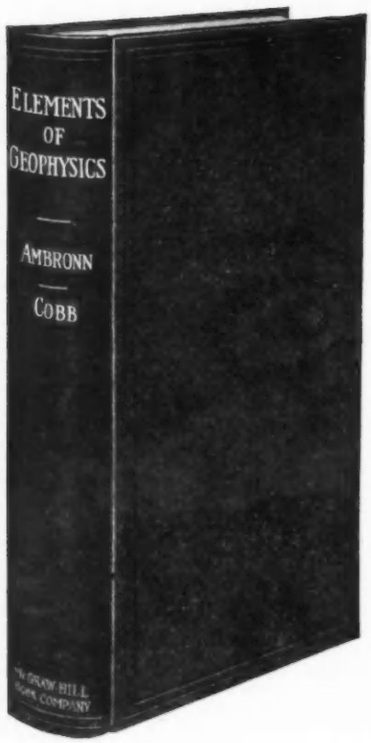

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RAINS COUNTY—Berry-Hale et al's Ow by 1, J. Alexander sur, dk. Rains County Corp. (R. A. Westbrook's) Wm. Cates 1, Ca vin Gage sur, top Pecan chalk 2232 ft, sd 241 ft.

RED RIVER COUNTY—E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, sd 2745 ft. Droppleman & Bundy's J. W. Cunningham 1, S. V. Chi sur, sd 2745 ft. Echols & Peters' E. Howison 1, W. Humphries sur, dk. Everett & Allen's W. F. Bryan 1, P. Vaughan sur, dk. Pierson et al's J. R. Dellahunty 1, sp and sd. Johnson Pet. Co.'s S. C. Style 1, E. M. Dean sur, sd 2345 ft.

ROCKWALL COUNTY—A. W. Walker & Son et al's M. S. Jones 1, S. Simmons sur, sd 700 ft; Paul Snow 1, J. E. Sherwood sur, sd 926 ft.

RUSK COUNTY—Dan S. Brooks et al's Alford 1, J. D. Reel sur, top Pecan chalk 2560 ft, dr 3000 ft. Carolyn Oil Corp.'s E. C. Carey 1, John Piburn sur, lcn. Devonian Oil Co. & Gulf Prod. Co.'s R. A. Motley 1, Wm. Killen sur, elev 376 ft, Pecan chalk 2684-3043 ft, Austin chalk 3518-3550 ft, cemt cas 3663 ft on oil sand at 3664-74 ft. R. W. Giles (Shreveport Prod. Co.'s) Newt Orr 1, Wm. Tippett sur, dk. F. Griffith et al's F. J. Lowe 1, Wm. Williams sur, elev 366 ft, top Pecan chalk 2790 or 2820 ft, dr chalk 3080 ft. J. S. Kimbrough et al's Weatherly 1, Robt. Martin sur, sp and sd. E. C. Laster, Inc. & Miller's B. B. Gray 1, Jas. McLean sur, dk. Morefield Drlg. Co. & B. T. Head, Jr.'s Jessie Ector 1, Daniel Clark sur, Pecan chalk 2420 or 2451 to 2920 ft, top Austin chalk 3455 ft, dr 3540 ft. Pearl Oil Co. (Paul Vitek's) Eaton 1, F. Cordova sur, elev 461 ft, Pecan chalk 2714-3099 ft, Austin chalk 3516-95 ft, cemt cas 3665 ft, cored oil sand 3681-86 ft. Rusk County Oil Co.'s Robertson 1-A, rig. Sat Sadler et al's Ed. Sparks 1, Abner Nail sur, set cas 1300 ft. Ward Oil Corp.-J. R. Elliott & Johnston Bros.' E. S. Thrash 1, F. Cordova sur, Pecan chalk 2764-3168 ft, Austin chalk 3548-84 ft, flowed 24 bbls oil per minute on six minute test from sand at 3753-3803 ft.

SMITH COUNTY—Big Indian Oil & Dev. Co.'s C. Mills 1, Jas. Jordan sur, elev 420 ft, rig; Holland 1, Thos. Allen sur, sp and sd. E. L. Chapman et al's Alexander 1, dk. East Texas Ref. Co.'s Tyesha 1, R. Wilson sur, lcn. Howard Pet. Co.'s Lee Holt 1, Barnes Clark sur, dr 1460 t. H. L. Hunt et al's W. R. Fair 1, McAnulty sur, rig. Imperator Oil Corp.'s I. M. Green (53.3-ac) 1, T. Hogan sur, sp and sd. C. M. Joiner et al's W. M. Wright 1, E. Van Sickle sur, top Pecan chalk 2360 ft, dr 2455 ft. Magnolia Pet. Co.'s J. R. Wright 1, J. Vargus sur, dk. Owen-Sloan Oil Co.'s M. Starnes 1, Sam Epps sur, rig. A. W. Phillips Oil Operators' M. T. Cole 1, lcn. Ruffin-Kilgore Oil Co.'s H. Florence 1, Barnes Clark sur, dr 1510 ft. Sinclair O&G Co.'s Jarvis 1, Juan Vargus sur, dr 1755 ft; Mayfield Co. 1, Jas Jordan sur, rig; Mayfield Co. 2, dk; Wiley 1, rig. T. B. Slick Estate & J. G. Kugle, Jr.'s M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 3080-3275 ft, co to deepen 3623 ft. Witherspoon Oil Co.'s T. O. Wright 1, J. Vargus sur, rig.

UPSHUR COUNTY—Arcadia Ref. Co.'s P. S. Johnson 1, J. H. Mallory sur, rig. Dr. F. F. Beeler et al's R. H. McClelland 1, M. P. Torres sur, dk. Breman & Woods' Robertson 1, J. Stephenson sur, rig. J. W. McCullough et al's John Copeland 1, M. Mann sur, lcn. Mudge Oil Co.'s J. D. Richardson 1, D. Ferguson sur, dr 820 ft. Penn Oil Co. et al's O. B. Gage 1, J. B. Davenport sur, top soft Pecan chalk 2574 and hard chalk 2634 to 2916 ft, Austin chalk 3610-3668 ft, top Woodbine sand 3668 ft, showing salt water and dr 3805 ft. E. R. Perkins-McPhail & Smith's Kay 1, T. G. Elliott sur, sp.

VAN FIELD—Helms et al's C. E. Bogue 1, Marshall University sur, elev 461 ft, sd 3098 ft. Humble O&R Co.'s R. S. Blake 11, cemt cas on top oil sand 2356-2930 ft; C. L. York (85-ac) 1, rig. Pure Oil Co.'s J. A. Bracken 3, completing 2947 ft; L. M. Brawner (147.9-ac) 2, dr 2140 ft; B. E. Crim (40-ac) 2, completed 2,000,000 ft gas 2927 ft; A. G. Maxfield 3, coring 2770 ft; M. F. Shirley (38-ac) 4, dr chalk

2560 ft; J. R. Shivers (46-ac) 2, rigg f up and sd; J. C. Stewart (16-ac) 3, dr 1710 ; W. E. Swain (20-ac) 4, dk; R. L. Wells 5, dk; Ella York (39.6-ac) 3, sd 2455 ft; E. York (Tract No. 3) (40.1-ac) 6, sp. The Texas Co.'s R. V. White (34.95-ac) 3, rig.

WOOD COUNTY—Wood County Dev. Co.'s M. M. Rick 1, Daniel Fuller sur, sd 1500 ft.

EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
HARRISON COUNTY—		
W. H. Hobson, Tr., Taylor 1, Henry Vardeman sur	*	3540
MARION COUNTY—		
Shasta Oil Co., Johnson 1, Wm. Mason sur	*	2827
PANOLA COUNTY—		
Knott et al's Marion Durham 1, Chas. Haley sur	*	3190

HARRISON COUNTY — Hunter et al's Daugherty 2, W. B. Burris sur, 12½-in cas 245 ft, ta in Georgetown 3563 ft. Karona Pet. Co.'s A. J. Bohler 1, S. F. Sparks sur, elev. 310 ft, top Nacatosh 1437 ft, dr 2200 ft. O. H. Parkening's T. J. Taylor 1, Walter H. Payne sur, rig. T. J. Taylor 2, J. C. Hawley sur, dk. Rowan & Nichols' Henry Pitts 1, E. A. Merchant sur, lcn. W. H. Hobson, Tr.'s Taylor 1, Henry Vardeman sur, elev. 284 ft, 12½-in cas 355 ft, top chalk 2095 ft, top Georgetown lime 3183 ft, dry abn in Georgetown lime 3540 ft. Crump & Hannagan's Dunn 1, Bettie Humphries sur, elev. 330 ft, base P.G. & top Saratoga 2830 ft, ta 4006 ft. W. G. Ray Drilling Co.'s Hall 1, D. Davis sur, 10-in 173 ft, top Austin chalk 3445 ft base A. 3471 ft top P.G. 2257 ft base P.G. 2859 ft top Georgetown 3472 ft sd wo. Siegel Bros. et al's T. J. Taylor 1, F. O'Neal sur, lcn. Sinclair O&G Co.'s Davenport 1, J. V. Morton sur, elev. 396 ft top P.G. 2420 ft base P.G. 2960 ft cored sand 3693-98 ft tested dry thru ds sd wo 3735 ft. Geo. L. Pace's Barker 1, Victor Pedraso sur, rig. Banner et al's Lowry 1, Stanfield sur, dk. Ryan Cons. Pet. Corp.'s H. H. Key 1, E. Carroll sur, dk.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev. 282 ft top chalk 1771 ft, 8¼ cas 1514 ft, junk in hole ta td 1878 ft. Rondeu & Hindman's McGaugherty 1, W. J. Wills sur, sd 2450 ft. Hindman et al's Lindsay 1, Alex. Albright sur, sd 400 ft. J. W. Hamilton's Wood 1, Alex. Albright sur, sd 400 ft. Shasta Oil Co.'s Johnson 1, Wm. Mason sur, top Georgetown 2825 ft, dry abn in Georgetown 2825 ft, dry abn in Georgetown td 2827 ft. Eden Oil Co.'s DeWare 1, R. Hazelwood sur, 10-in 400 ft, dr 1510 ft. Sinclair O&G Co.'s Wright-Braden 1, Jacob Grover sur, dr gumbo 3426 ft. D. R. Coulter 1, Wm. Russell sur, dr shale 3215 ft. Claunch et al's Laun 1, Henry Fugham sur, dk.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 6⅝ cas 2670 ft, tested est 50,000 ft gas much sw 2998 ft salt water abn in lime and shells td 3190 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, elev. 186 ft, sd 3335 ft. Dillon & Bradham's Baldwin 1, Hampton West sur, 12½ cas 43 ft, claim top P.G. 1500 ft, sd 1555 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur. lcn.(Trinity test). Neff et al's Brumble 6. B. C. Jordan sur, dk. (Trinity test). Texas Co.'s Brumle 12, Jno. Womack sur, 10-in 1200 ft, dr hd lime 2701 ft. (Trinity test). Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, 12½ cas 780 ft, top chalk 1352 ft, 8¼ cas 1900 ft. Ark. La. P.L. Co.'s Werner Sawmill 3, B. C. Jordan sur, 12½ cas 142 ft, 9-in 3448 ft, dr lime and anhydrite 4408 ft. Everett Prod. Co.'s E. L. McDaniel 1, Alamson Barr sur, sp dr 300 ft (third hole all shallow).

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY — Sloane Prospecting Co.'s T. B. Sandford 1, M. M. Vann sur, rig. Windham 1, A. H. English sur, rig. Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd wo rotary td 3111 ft. I. M. Bradley et al's J. J. Asberry 1, G. W. Mitchell sur, dk. E. L. Chapman's Pickering Lbr. Co. 1, C. F. Henry sur, 10-in 240 ft, fsh ds 1653 ft. Maudding et al's Frost. Lbr. Ind. 1, A. B. Fountain sur, dr 400 ft. H. H. Gracey's J. A. Morrison 1, Wm. English sur, dk. T. A. Martin's J. B. Bush 1, Alfred Lindsey sur, dk.

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
EDWARDS COUNTY—		
Phillips Pet. Co., Holman 2	*	8123

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, elev 3217 ft, top anhydrite 1678 ft, salt 1720-2810 ft, top brown lime 4035 ft and white lime 4180 ft, co and flow 50 bbls 30.5 gravity oil daily after shot 600 qts 4236-4506 ft, td 4565 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, sd 2800 ft.

COKE COUNTY—Reid-Hitchins & Stanolind O&G Co.'s Duncan 1, sp and sd.

CONCHO COUNTY—W. I. Bett's & Dennis' Wood-Hendrick 1, sp and sd. A. W. Turner-Cromwell & Wesner's Brosig 1, elev 1699 ft, co 1885 ft.

CRANE COUNTY—Cranfill Bros. & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, fsh tools 5336 ft. H. H. Sides et al's B P. Nolen 1, dr 180 ft.

CULBERSON COUNTY—Cranfill Bros. Oil Co. et al's Seay 1, set cas 1940 ft. W. L. Kornrumpf et al's W. D. Garren 1, sd 1280 ft.

DAWSON COUNTY—R. A. Albaugh et al's Robinson 1, sp and sd.

ECTOR COUNTY — Galt-Brown Co.-Penn Oil Co. Unit Plan's Cowden 1, elev 3047 ft, top anhydrite 1525 ft, top salt 1535 ft, dr 2075 ft. Southern Crude Oil Pur. Co.'s Cowden 2, elev 3965 ft, top anhydrite 1782 ft, salt 1872-2805 ft, flowing 20 bbls oil per hour, dr lime 4220 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Edwards 2, elev 2274 ft, abn hfw 8118-23 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Bobadella 1, sd 540 ft.

FISHER COUNTY—Cranfill-Reynolds, Inc.'s Flanigan 2, dr 3560 ft. Roeser-Pendleton, Inc.'s, Gribble 1, elev 1864 ft, top gray lime 2179 ft, top Noodle Creek lime 2950 ft, sd hfw 3202-05 ft. Stanolind O&G Co.'s Steele 2, dr 300 ft. The Texas Co.'s J. A. Jean 1, rig. Texas Unity Oil Co.'s First Nat'l Bank 1, dr 2065 ft.

GAINES COUNTY—Landreth Prod. Corp.'s Nick Alleu 1, nwc sec 2, blk A-30, P.S.L. sur, lcn. Texas Consolidated Oil Co. & T. P. Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, top anhydrite 2120 ft, top salt 2225 ft, sd 3435 ft.

GARZA COUNTY—Garza County Dev. Co. (Penny & Porsey's) Justice 1, elev 2266 ft, top salt 550 ft, dr 1560 ft.

HOWARD COUNTY—Conoco et al's E. E. Brindley 1, top salt 1170 ft, cem 10-inch cas 1617 ft, td 1910 ft. Greene Prod. Co.'s Denman 1, sp and sd.

HUDSPETH COUNTY—R. G. Patillo & Ed. Welch's K. S. Briggs 1, sd 350 ft.

IRION COUNTY — Stanolind O&G Co.'s W. H. Williams 1, elev 2544 ft, show oil 4163-73 ft, dr 4360 ft. Straughn et al's Tankersley 1, elev 2306 ft, sd 1506 ft. F. E. Webb et al's Nutt 3, dr 1020 ft. Perry & Fox et al (was Chawford's) Nutt 1, has show oil and water in sand 1443 ft.

JONES COUNTY — Bonds-Trout-Julian et al's Williams 1, sd 2581 ft. Condor Pet. Co.'s Brewer 1, rig. Jake Croft & Tidal Oil Co.'s W. D. Swann 1, lcn. Ewmo Oil Corp.'s Hoyt 1, testing 350 ft oil in hole at 1971-71½ ft. Hardly Able Oil Co.'s Butler 1, ur 2380 ft. C. C. Julian & Roy. Co.'s Sears 1, lcn. J. B. Jameson et al's King 1-A, fsh 1490 ft. Shaheen Oil Co. et al's Chittum 1, sd with 1850 ft oil in hole 1972-75 ft, td 2033 ft. Ungren & Frazier & Al Kruger's King 1, testing broken oil pay 1683-2007 ft. Sam C. Yingling et al's E. D. Coates 1, dr 1240 ft. Young & McNeill's L. R. Cade 1, rig.

LOVING COUNTY—The California Co.'s J. G. Allen 2, elev 2742 ft, salt 830-4110 ft, top Delaware 4307 ft, flowed 160 bbls after pb from 4352 to 4349 ft and shot; Allen 3, elev 2741 ft, top salt 815 ft, dr 2370 ft; Allen 4, rig. Carl Cromwell & Atlantic Oil Prod. Co.'s Russell 2, rig. Erwin & Mchres Dev. Co.'s McGinley Corp. 1, rig; McKenzie 1, lcn abn; Lillie Thorpe 1, sp and sd. Folbre & Evans' D. P. Dean 1, fsh 1385 ft. Grisham & Hunter Corp.'s Dean 1, sd 1310 ft. Henshaw et al's Reagan 2, rig. Pete Hoffman et al's Ramsey 1, top salt 760 ft, sd 3620 ft; Ramsey 2, dr 475 ft. Lewis & Slagel Drlg. Co.'s Cartwright-Henderson 1, elev 2901 ft, salt 585-2907 ft, pb from 3182 to 3179 ft, for shot. Lockhart & Co.'s I. J. Bell 1, dr 800 ft. H. W. Martin et al's W. D. Johnson 1, lcn. Richmond Drilling Co.'s Wheat-Russell 1, dr 550 ft. W. A. Sudderth & James' Capitola Pool 1, dr 480 ft. F. S. Tennant et al's Roy Martin 1, rig. West Texas Pet. Corp. (Eppenauer's) Allen 2, top salt 810 ft, sd 4110 ft; Salisbury 1, top salt 890 ft, dr 4170 ft.

MENARD COUNTY—J. C. Barnett et al's Callan 4, dr 740 ft. L. G. Priest et al's Sorrells 1, elev 2279 ft, sd 2965 ft. Voss & Bryan's Brandenberger 1, dr 730 ft.

PECOS COUNTY — W. B. Hagan et al's Shearer 1, dr 165 ft. J. R. Miller et al's Bennett 1, sd 2285 ft. Penn Oil Co. et al's J. B. Alvis 1, elev 3493 ft, dr 2845 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, sd 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, temp. abn 5000 ft. Riser & White (now Cosby Prod. & Roy. Co.'s) Riser 1, dr 600 ft. W. F. Whitaker & Calloway's Devlin 1, elev 2706 ft, sp and sd.

REEVES COUNTY—The California Co.'s Kloh 2, dr 1725 ft. Humble O&R Co.'s Balmorlea 1, rig. Lee O. White et al's Mrs. Hersheusen 1, co 4415 ft.

RUNNELS COUNTY—Chas. Dutton et al's Dean 1, sd 2335 ft.

SCHLEICHER COUNTY—Eastland Oil Co. Unit Plan's Tisdale 1, elev 2295 ft, dr 1935 ft. J. D. Wesner et al's Ratcliff 1, elev 2408 ft, dr 2350 ft.

SCURRY COUNTY — R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, fsh 5003 ft. Seifert & Dibble's Blackman 1, top salt 720 ft, sd 3100 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 3, elev 1918 ft, sd 1970 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, dr 6330 ft. Sanger et al's Abilene 1, elev 1759 ft, sd 2785 ft.

TERRELL COUNTY — Mid-Kansas O&G Co.'s M. H. Goode 1, elev 2405 ft, making 1,890,000 ft dry sweet gas, sd in black lime and shale 6120 ft. Leonard Jones et al's Peckenham 1, elev 2607 ft, dr 1245 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 6780 ft.

UPTON COUNTY—Bennett Oil Co. & P. H. Williams' Shirk 1-A, elev 3106 ft, top lime 2510 ft, sd with 900 ft oil in hole 2660-2727 ft. C. C. Duffey et al's McClintic 4, dr 2560 ft. Gulf Prod. Co.'s McElroy 92, elev 2687 ft, flowed 307 bbls oil after shot 230 qts 2879-2997 ft and comp.; McElroy 93, top salt 1100 ft, dr 1175 ft; McElroy 94, rig. Mintex Oil Co. & Harry Baldwin's Lane 1, re-set cas 450 ft. Bert Weekley Oil Corp. et al's McClintic 2, dr 790 ft.

WARD COUNTY—Alpine Oil & Dev. Co.'s Boogher 3, elev 2741 ft, top salt 810 ft, dr 1565 ft. Beckley et al's Johnson 1, dr 760 ft. Bell & Wier's Boogher 1, sd 670 ft; Boogher-Cummings 1, top salt 785 ft, dr 1775 ft. Buster Black et al's Hall-Roberts 1, dr 300 ft. Alex Bradford et al's B. Carson 1, dr 1015 ft. Clyde Bradford et al's Hordage-Wilson 1, dr 960 ft. California Co. & Atlantic Oil Prod. Co.'s A. B. Gordon 1, elev 2523 ft, top salt 1000 ft, dr with 500 ft fluid in hole 2376 ft. Central Gas & Oil Co.'s Lee Monroe 1, sp. Gibson Bros. et al's Johnson 1, dr 770 ft. Gulf Prod. Co.'s Hutchings 7, elev 2648 ft, top anhydrite 910 ft, top salt 1162 ft, fsh tools and flowing 50 bbls oil daily 2490-2520 ft; O'Brien 17, dr 425 ft. Harkinson et al's A. Emory 1, dr 220 ft. Magnolia Pet. Co.'s Atlantic-Sealy 1, elev 2686 ft, top anhydrite 1505 ft, ur 2175 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, top salt 1600 ft, sd 3180 ft. Peck et al's Geo. Merritt 1, dr 630 ft. Rector Oil Co.'s Smith 1, machine. Rickford & Fugler's Boogher 1, top salt 790 ft, dr 2160 ft. Shipley Oil Corp.'s Monroe 1-A, elev 2655 ft, top salt 2485 ft, sd in anhydrite 3803 ft; Hayzlett 5, sd after shot, td 2507 ft. Simms Oil Co.'s M. Himmel 1, rig. Chester Smith et al's Boogher 1, dr 2140 ft. White et al's L. H. Owenby 1, sp.

WINKLER COUNTY—Magnolia Pet. Co.'s Bashara 1, elev 2884 ft, top anhydrite 829 ft, top salt 996 ft, top lime 2317 ft, cem hole account water 3367 ft.

TEXAS GULF COAST

ANGELINA COUNTY — R. D. Moore's Abney Est. 1, sd 600 ft. Pollock Oil Co.'s Sessions 1, Garza sur, lcn.

AUSTIN COUNTY—O'Hara et al's Schrader 1, Hacienda sur, sd 3480 ft. Empire's Kunze 1, San Felipe, dr 6470 ft shale. Parmeson & Cafferkey's Scholeckte 1, Fitzgibbons sur, dr 550 ft shale. Humble's Paine 12, Raccoon Bend, swabbing 3550 ft; Remmert 1, lcn.

BRAZORIA COUNTY—Thos. Faust et al's

Fee 6, s mi s Nash Dome, sd 6220 ft. United Oil Synd.'s Speer 1, 3 mi w Danbury, dr 1800 ft gumbo. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, sd 5140 ft. Layne et al's Wisdom 7-A, Damon Mound, set 8¼-inch cas 3670 ft. The Texas Co.'s Ewing 1, Manvel, testing gas 7648 ft. Rycade & Amerada's Seaburn 2, Stratton Ridge, dr 7300 ft lime.

BURLESON COUNTY — Doran et al's Sparks 1, ne corner of county, fsh 1300 ft. Mid-South Oil Co.'s Duckworth 1, 2 mi e Clay Station, sd 2590 ft. Reynolds Oil Co.'s Harris 1, 4 mi se Creisman, sd 400 ft.

CALHOUN COUNTY — The Texas Co.'s Smith 1, Chocolate Creek, dr 3820 ft shale.

CHAMBERS COUNTY—Pure's Mayes 13, Lost Lake, ru.

FAYETTE COUNTY — Elam & Reynolds' Florence 1, sd 1030 ft.

FORT BEND COUNTY—Gulf's Moore 29, Frazier sur, lcn.

GALVESTON COUNTY—Yount-Lee's Cade 20, ru.

HARDIN COUNTY—Rio Bravo Oil Co.'s Fee 112-A, Cotton sur, lcn. The Texas Co.'s Fee 307, Sour Lake, sd 3000 ft.

HARRIS COUNTY—Humble's Minnetex 5, Mykawa, ru; Minnetex 6, ru. Rio Bravo Oil Co.'s Settegast 21-A, Pierce Junction, ru; Westheimer 1, lcn. Smith-Hamill Dr. Co.'s Parsons 1, Jones sur, lcn. Smith et al's Fee 3, installing pumping unit. Tilton & Perot's Gulf Jones Fee 1, dr 3700 ft sand. Warner-Quinlan's Minchen 2, comp. for 600 bbls 4486 ft.

HOUSTON COUNTY — A. E. Winfree's Hodges 1, lcn.

JEFFERSON COUNTY—Humble's McFadden 1, dr 6340 ft shale. Keith et al's Reid-Hankamer 1, 3 mi ne Westbury, dr 4180 ft gumbo. The Texas Co.'s Pipkin 4, Big Hill, dr 5620 ft shale. Yount-Lee's McFadden 145, lcn.

LIBERTY COUNTY — Cranfill-Reynolds Davis 7, set 12½-inch cas 1330 ft. Hamm et al's Harvard 1, Davis Hill, sd 1010 ft. Gulf's Boyt 13, lcn. Humble's Breeden 2, Moss Bluff, dr 6340 ft shale; Sergent 2, set 5-inch screen 5890 ft. Texas Gulf Sulphur Co.'s Cowan 1, Moss Bluff, dr 800 ft sand; Munger 1, abn 1107 ft.

MATAGORDA COUNTY — Cockburn Oil Co.'s Hawkins 2, Shepherds Mott, prep to dd 5244 ft. Empire's Boker 1, Citrus Grove, dr 5300 ft shale and sand.

MONTGOMERY COUNTY — Lake Creek Oil Co.'s Hunt 1, s Conroe, changing rigs. Wilhite & Hornbeck's Lieberman 1, 2½ mi w Conroe, testing sand 3552 ft.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, Stephenson sur, changing rigs.

POLK COUNTY—Freeman et al's Freeman 2, 4 mi se Leggett, dr 2620 ft shale.

ROBERTSON COUNTY — Long & Cates' Maris 1, 2½ mi ne Franklin, dk. W. N. Quick's March 1, 7 mi sw Franklin, sd 1000 ft.

SAN AUGUSTINE COUNTY — Lambeau Thompson Dr. Co.'s Whitton 1, lcn.

SAN JACINTO COUNTY—Arkansas Fuel Oil Co.'s McMurray 1, 4 mi ne Cold Springs, abn 4050 ft. E. P. Edwards et al's Bennett 1, sd 40 ft.

TYLER COUNTY—King Oil Co.'s Caswell 1, sd 1250 ft. Texas Sun Co.'s Wilson 3, dr 4770 ft lime. L. H. Wentz's Long Bell Lbr. Co. 1, Seale sur, 5 3/16-inch cas 2630 ft.

WASHINGTON COUNTY—Cord Oil Co.'s Hahn 1, dr 1870 ft shale. Penn.-Tex Oil Co.'s Kamas 2, dr 1420 ft shale. Sun O'l Co.'s Clay 5, Clay Creek, coring slight oil show 1550 ft; Janner 5, dr 500 ft shale; Marcus 3, lcn; Scholeckte 3, Gay Hill, lcn. Yegua Oil Co.'s Graves 1, sd.

WHARTON COUNTY—H. H. Givan's Hudgins 3, dr 1420 ft gumbo and lime.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
OUACHITA COUNTY—		
J. D. Reynolds, Grayson 1, 21-15-19	40	2197

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-8-3, cemtd back to 2865 ft, ta old td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, nw ne 4-20-8e, sd cur titles 1214 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, sd 3740 ft.

DALLAS COUNTY—Jno. James, Tr.'s, Fordyce Lbr. Co. 1, ne nw 11-9s-15w, 10-in 176 ft, fsh 1200 ft 3-in ds, td 2425 ft in chalk. E. C. Brewer, Tr.'s, Hillman 1, se ne 20-10-13, 10-in 138 ft, dry 2628-48 ft, coring shale 2768 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, cas pulled hfsw, td 3756 ft.

GRANT COUNTY — Spann & McClung's Sarah Page 1, sw nw 3-3-12, dr gumbo 618 ft.

HOT SPRINGS COUNTY—Jno. Watkins, Tr.'s, Cunningham 1, 11-5-16, sd wo drill stem 220 ft.

JOHNSON COUNTY—Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, 12½ cas 115 ft, sd 2520 ft. Smitherman & McDonald's Bodcaw 1, se nw nw 16-15-22, 12½ cas 42 ft, 8¼ cas 1176 ft, cored oil sand 1194-98 ft, sd wo, td 1198 ft. Cresby Prod. & Royalty Co.'s Biddle 1, 1-20-26, lcn.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Fay Roberts Oil Co.'s Russell 1, nw nw 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallem 2, cent sec 17-16-22, sd 405 ft; Hallem 3, ne sw 1-17-26, sd 42 ft.

MILLER COUNTY—E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, 6⅝ cas 2792 ft, 4½ cas 2957 ft, tested sw 2961 ft, sd 2968 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, ta junk in hole, td 2832 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, ta 890 ft. Gusher Bend Oil Co.'s Adams 1, nw nw 24-14-26, 10-inch 115 ft, ta 2680 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 35-15-26, 10-inch 85 ft, sd. J. D. McRae's Smith 1, nw se 28-15-26, dk.

OUACHITA COUNTY — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, sd junk in hole 2907 ft. Copenhaver et al's Elliott 1, se se 11-15-17, 6-inch 2185 ft, td 2190 ft. Wesson & Bonner's Wesson 1, sw nw 22-15-19, 6⅝ cas 2083 ft, wo power to pump 300 ft fluid in hole. td 2169 ft. J. D. Reynolds' Grayson 1, 21-15-19, 10-inch hole 42 ft, Nacatosh 1502-14 ft, cored sand 2175-90 ft, 6-inch 2151 ft, pumpnig 40 bbls oil 3 per cent fresh water, td 2197 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, shew heavy oil 567 ft, dr lime 2768 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft, tested 1 mil ft gas 3285 ft, 8⅝ cas 3415 ft, 8-inch 3451 ft, ur 5 3/16 cas, td 4145 ft; Baird 1, se nw 11-7n-20w, 10-inch 1168 ft, 8-inch 2700 ft, dr hard sand 2850 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Waldron O&G Co.'s J. G. White 1, sw nw 17-3n-29w, 10-inch 225 ft, dr 1580 ft (second hole).

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd after testing sw 2515 ft. Ozark Nat. Gas Co.'s A. B. Bryant 1, se ne 28-8n-29w, dr 660 ft.

SEVIER COUNTY—Tri-State O&G Co.'s Bank of DeQueen 1, s½ sw¼ 34-8s-32w, lcn.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft, top red beds 2779 ft, sd in shale 3328 ft. Rice et al's Whatley 1, 7-17-15, sd 2186 ft. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-inch 103 ft, sd 2608 ft. Lion O&R Co. et al's Guy P. Hayes A-9, sw ne 4-16-15, lcn (to be 5000 ft test). Wilson & Chapman's Ned Parker 1, nw se 3-18-13, rig; Hadley 1, ne sw 3-18-13, 10-in 102 ft, top Nacatosh 2300 ft, top Meekin sand 2550 ft, top red beds 2933 ft, sd 600 ft fluid in hole, 30 per cent sw, td 3570 ft.

WASHINGTON COUNTY—Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-12, sd while fsh cas, td 5710 ft.

MOUNTAIN STATES

MONTANA

BIG HORN—Continental Oil Co., Lynde 2, se 21-6s-35e, sd 3405 ft.

CARBON—Spomont Pete Co.'s Cruse 1, 32-6s-18e, dr 100 ft.

CASCADE—Andover Oil Co.'s Floweree 1, se 29-21-2w, sd 1405 ft. Lone State Oil Co.'s McLean 2, se 13-21-3e, dr bel 150 ft.

CHOTEAU—Northern State Oil Co.'s Woodward 1, sw 20-14n-24e, ream 6-in to sow, 2845 ft. Melton Corp., 24-21n-17e, td 2850 ft. Powman Oil Co., 24-19-11e, to res 200 ft. Williston Shelby O&G Co., Flack 1, ne 12-28-11, fresh water at 2890 ft.

GLACIER—Fulton Pete Corp.'s Blackfeet 1, ne 28-36n-12w, co to bottom at 1240 ft. B. & H. Oil Co.'s Haines 1, se 2-34-6w, sd 2762 ft. Jeffries-Hoerr's Dawson 1, ne 7-31-12w, dr 2900 ft.

GOLDEN VALLEY—Texas-Pacific's 1, sw 21-8s-21e, water 4000 ft. J. F. Dealey et al's 1, ne 28-5n-22e, to res.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-5e, resum 3475 ft. Sunburst, McLaren 1, se 9-37-6e, sd 3115 ft. C. G. Howard, Schoonover 1, nw 18-36-6e, rigging up. Perkins, Brown 1, ne 24-35-4e, bldg rig.

ROSEBUD—Prairie O&G Co., 1-X, 26-10-39e, dr out cement 2415 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft.

TOOLE—Liquid Gold Oil Co.'s Robert 1, ne 25-36-12, bldg rig, td 2150 ft. International Roy. Hold. Co.'s Henry 1, sw 26-35-36, sd 2650 ft. A-1 Pete Co., se 24-36-1e, sd 1555 ft.

YELLOWSTONE—Peter Antonioli, 21-2n-25e, dr bel 1200 ft.

COLORADO

ADAMS—N. M. Slatt's 1, se 27-26-64w, carry 8⅝-inch at 2710 ft.

ARAPAHOE—McDebb Drlg. Co.'s Fitzsimone 1, 7-45-55, dr 5776 ft. Merrett et al, U. P. 1, nw 17-5-65, stand 1600 ft, hfw.

BACA—A. R. Jones Oil & Optg. Co., Boice Cattle 1, 22-34-42w, dr 4796 ft.

EL PASO—Utemore Synd., Cannon 1, ne 10-16s-66w, prep to res 1125 ft.

GRAND—Oil Minerals Land, Inc., McElroy 1, sw 14-2n-87w, dr 400 ft.

HUERFANO—Parker Club, Fee 1, se 4-28s-68w, 5 3/16-inch cas, td 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-69w, dr 3880 ft.

LAS ANIMAS—Oklahoma Drlg. Ass'n, Radcliffe 1, ne 28-28-52, sd 100 ft.

LA PLATA—McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, lcn. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, stand 3125 ft. Murchison Oil Co., Doescher 1, nw 29-33n-12, sd 1225 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, ur to 3450 ft.

MOFFAT—Mtn. Fuel Supply's State 2, tract 37-12-100, co 2212 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, sd 2960 ft.

MONTEZUMA—G. H. Talcott et al, McElmo 1, 7-35n-16w, dr 438 ft.

MONTROSE — Uncompahgre O&G Co.'s Colo. Title & Trust 1, 27-50n-10w, dr 65 ft.

MORGAN—Inc. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, cas trouble, td 4090 ft.

PUEBLO—Anchor Oil Co.'s Easley 1, sw 35-22s-57w, wtg cas 520 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, dr 1823 ft. So. Park O&G Co.'s Easche 1, ne 5-9s-76w, dr 610 ft.

RIO BLANCO—California Co., Raden 1, se 30-2n-102w, mvg in.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, stand 1510 ft.

NEW MEXICO

CHAVES—Warman Oil Trust, Siebert 1, ne 27-13-24, dr 2316 ft. Neal et al, Russell 1, nw 21-14s-25e, dr 1800 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, wtg for 6⅝-inch, td 3010 ft.

HARDING—Kummbacaa O&G Co., Kerlin 1, se 34-21n-30e, gas show at 300 ft.

LUNA—Angelus Oil Mining Ass'n 1, se 20-21s-10w, stand 6095 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms et al, A.T.S.F. 1, se 19-18n-8s, stand 1900 ft. United Kern ePte. Inc., 1, sw 1-18n-11w, lcn. Dysart et al, Dysart 2, ne 14-14n-10w, dr 1456 ft.

MORA — Santa Fe Diox-Ice Co.'s Wagon Hound 1, ne 14-19-21, dr 105 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equip. at 1328 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co.'s

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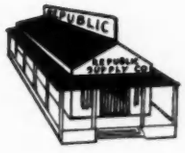

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SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, stand 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2430 ft. Childers Drlg. & Prod. Co.'s Westwater 2, 23-31-16w, prep to res, water trouble at 2490 ft. Rio Grande Dev. Co.'s 2, 9-29-11, td 1480 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, prep to sidetr dr pipe, td 4730 ft. J. B. Witt O&G Co., Mangum 1, se 33-29n-11w, lcn. San Juan Leaseholds, Bowman 3, ne 30-30-15, dr 2666 ft. Reserve Oil Co., Reserve 3, se 36-22n-14w, dr 725 ft. R. C. Oswell et al, nw 34-30n-14w, spdg at 25 ft. Murchison Oil Co., Angels Peak 6, se 34-29n-11w, prep to res at 1730 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2340 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, dr 3471 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, sd 750 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, prep to res 1415 ft. Con-O-Kul Oil Co., Cherryvale 1, ne 34-17n-21n, prep run 15½-inch at 4450 ft.

TORRANCE—Wms. et al's Staplin 1, ne 16-8n-10e, prep to res 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-7-7e, dr 1450 ft.

VALENCIA—Acme Oil Co.'s N. M.-Ariz. Land Co.'s 1, ur to 4958 ft. Harlan et al, Harlan 1-A, 5-6n-2e, dr 6350 ft.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-87-97, sd at 4080 ft with show of oil.

CARBON—Midwest Refining Co., U. P. 1, 27-11-87, sd 1810 ft. Pete Expl. Co. of Calif., 29-23-89, fsh bit 2535 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-33-95, sd for orders, td 4485 ft. P. & R. 1, 33-34-92, sd 4906 ft. Yellowstone Oil Co.'s 1, 15-39-92, dr 600 ft. Ward O&G Co., 28-34-90, gas show 1500 ft. Wiebolt et al, 2-35-99, dr 1300 ft.

JOHNSON—R. C. Tarrant et al, 4-43-82, dr bel 2150 ft.

LINCOLN—Mountain Oil Corp.'s 1, 36-25-116, td 1500 ft. Wyo. Prod. Co., 14-42-113, dr bel 1225 ft.

NATRONA—Summit Oil Co., 21-33n-80w, sd 1220 ft, wait equip. Midwest's 11, nw 32-34n-77, stand 5340 ft. Cuyler Oil Co., 23-36n-85w, dr 1150 ft. Golden West Oil Co., 36-36-81, co 1242 ft. Midwest's Midway 1, ne 23-35n-79w, coring 5995 ft.

NIOBRARA—West Virginia Synd., 7-35-62, td 987 ft, cas trouble.

PARK — Resolute Oil Co., 17-57-101, dr 8370 ft.

SWEETWATER—Vermillion Oil Co.'s 1, se 16-12-99, co 3465 ft.

UINTA—Park City O&G Co., nw 6-15-113, dr bel 2400 ft.

WASHAKIE—Dakota-Wyoming Oil Co., ne 24-47-90w, small show 200 ft, to be cased off. Ohio Oil Co., lot 14, 19-45-92, 15½-inch cem at 782 ft, dr water wells.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, prep to cem 15½-inch at 1000 ft.

OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros.'s Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al's Sornick 1, nw c se, hfw 2070-2170 ft, sd 2700 ft. T 26n, R 1w, Sec. 32, Boucher et al's Jefferson 1, ne c sw, sd 3502 ft.

HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire's Bruce 1, sw c ne ne sw, td 7935 ft shot, no results, will plug.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Collmer 2, ne c se ne sw, sd 5640 ft lost tools.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al's Acre 1, c sw ne, show gas 5298-5303 sd 5330 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, se c nw, sd 5850 ft.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall et al's Miksch 1, nw c sw hfw, 4923-26 ft will plug.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma's Phillips 1, c nw sw, sd 4600 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al's Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28, R 3e, Sec. 24, Summitt Drlg. Co.'s Hays 1, nw ne nw, show oil 3185-3208 ft, dr 3244 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley et al 1, se c sw, td 2865 ft D&A.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochrane et al's McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al's Milsap 1, se c sw, td 1750 ft sd. T 20n, R 5e, Sec. 6, W. A. Rockstool's Berry 1, nw ne sw, sd 1951 ft show gas.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic's Beebee 1, sw ne sw, lcn. T 13n, R 6e, Sec. 9, Mid-Continent et al's Lillis 1, ne c se, rigging up.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al's Shepperd 1, se nw sw, sd 3690 ft. T 11n, R 10e, Sec. 4, M. H. Watts' Chaplin 1, sw c, lcn.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, sw nw se, show gas 5654-64 ft fsg tools 5687 ft. T 8n, R 14e, Sec. 14, C. O. Cannady's Smith 1, sw c ne nw nw, rig and tools. T 7n, R 14e, Sec. 5, C. O. Cannady et al's Travis 1, c sw ne, rig. T 6n, R 15e, Sec. 7, Perrine et al's Ringling 1, nw c, ne dr 1235 ft.

LATIMER COUNTY—T 6n, R 18e, Sec. 4, Choctaw Gas Co.'s Weaver 1, c ne nw, dr 3030 ft. T 6n, R 19e, Sec. 16, P. English et al's Weaver 1, c nw se, sd 300 ft.

PITTSBURG COUNTY—T 5n, R 14e, Sec. 9, R. Vincent et al's Fee 1, nw c se, sd 100 ft.

ATOKA COUNTY—T 1n, R 15e, Sec. 9, Edgerton et al's Rolland 1, c nw, sd 700 ft.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee's St. Joseph 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al's Bruner 1, se c nw, rig.

POTTAWATOMIE COUNTY—T 8n, R 3e, Sec. 21, Droppleman's Jones 1, se c nw, dr 2960 ft. T 6n, R 4e, Sec. 6, Magnolia's Harris 1, nw c, sw dr 2070 ft.

SEMINOLE COUNTY—T 6n, R 7e, Sec. 15, Magnolia's Powell 1, nw sw se, dr 2300 ft.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil Co.'s Williams 1, c sw, dr 3710 ft. T 11n, R 26w, Sec. 4, J. J. Rook and Palmer's Davis 1, c nw ne, (owd) sd 2956 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne, sd 150 ft.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al's Rocker 1, nw c, dr 1665 ft. T 8n, R 18w, Sec. 21, Burns &Prince's Dock 1, sw c, sd 150 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Good and Dowell's Cliffell 1, nw c, sand 1462-1501 sd 1615 ft. T 7n, R 21w, Sec. 23, H. A. French et al's Murphy 1, sw nw se, c.o. 1500 ft.

STEPHENS COUNTY—T 1n, R 8w, Sec. 25, Rose Southard's McKinley 1, ne c, sd 1063 ft.

HUGHES COUNTY—T 5n, R 11e, Sec. 15, J. J. Wright's Roberts 1, se c sw, ¶2 915-18 ft, sd 1645 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee's Phillips 1, ne e sw, bldg. rig.

COAL COUNTY—T 2n, R 8e, Sec. 10, Whitney et al's Miller 1, se c ne, (owd) sd 760 ft. T 1n, R 8e, Sec. 35, W. E. McCraw's Stiring 1, ne c se, dr 770 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al's Guinn 1, nw c, show gas 360-72 ft sd 500 ft.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson's Ussery 1, se c, sd 325 ft. T 7s, R 10e, Sec. 8, Bryan Oil Co.'s Childs 1, ne se sw, sd 660 ft.

SOUTHERN CALIFORNIA

ALHAMBRA—Fred H. Hammer's Huntington Land 1, 24-1-13, sd 3393 ft.

BASSETT—Huntington Central Oil Co.'s Pellissier 1, 34-1-11, lcn.

BELL—Cudahay Community Oil Ass'n.'s 1, 30-2-12, dr out cmt 1325 ft.

CALABASAS—L. W. Rucker's 1, 26-1-17, dr 150 ft.

CORONA—Western Gulf's Abacherli 1, 12-3-8, dr shale 2768 ft.

CULVER CITY—Olympic Oil & Realty Co.'s 1, 14-2-15, m on iron 5015 ft.

DOMINGUEZ—Tenacity Oil Co.'s Del Amo 1, 11-4-13, co 8500 ft.

FULLERTON—Brea-Canyon Oil Co.'s Fee 47, dr hard shale 6262 ft. Standard's Bastan-

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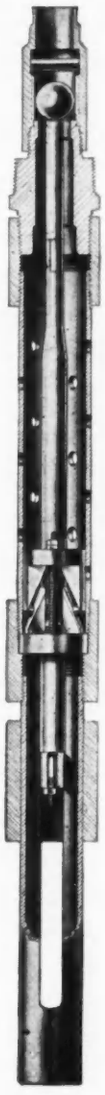

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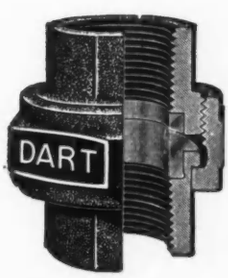

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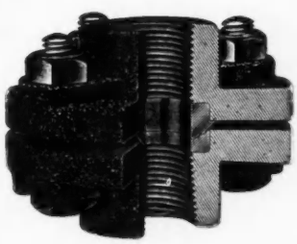

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chury 1, 21-3-10, 8⅝-in cas cmt 6945 ft, td 8145 ft.

HAWTHORNE—Jim Thorpe's 1, 10-3-14, dr shale 3628 ft.

HERMOSA BEACH—Calico Royalty Series' Calico 3, 6-4-14, fsh for drill pipe, td 2525 ft. E. S. Cone's-Kellog-Burdick 1, 6-4-14, rigging up. Corniel Oil Corp.'s 1, 31-3-14, dr out cmt 3190 ft. Hermosa Exploration Co.'s 1, dr shale 2414 ft. Tulsa Oil Co.'s Hermosa 2, 6-4-14, dr shale 1100 ft. Westwood Pet. Co.'s 1, 6-4-14, dr shale 2522 ft.

NEWHALL — Consolidated Oil Co.'s Hammond 1, 8-3-16, dr shale 2663 ft. York & Smullin's Clampitt 6, 13-3-16, dr gray sand 2065 ft.

NEWPORT — Standard's Orvine 1, 26-6-10, dr shale 4128 ft.

OCEAN PARK—Hines Pet. Corp.'s Happy Days 1, 8-2-15, dr 4910 ft.

OLIVE—Texas' Community 1, 7-4-9, dr shale 4040 ft.

PLAYA DEL REY — Mesmer City Realty Co.'s 1, 24-2-15, dr shale 4241 ft. West Port Oil Co.'s 1, 27-2-15, re-dr 4925 ft, td 5590 ft.

PUENTE—Rio Hondo Oil Co.'s Rowland 1, 14-2-10, dr 3733 ft. Rucker & Croul's Grazide 2, 22-2-10, dr gray sand 2029 ft.

ROSEMEAD—Rancho Oil Corp.'s Harmon 1, 30-1-11, dr gray sand 5575 ft.

REPETTO HILLS—Texas' F. M. 1, 4-2-12, dr rock 2729 ft.

SAN FERNANDO—San Val Oil Co.'s 1, 14-1-16, testing, td 2045 ft, water.

SUNSET BEACH—Gieck Oil Corp.'s 1, 20-5-11, rig.

WILMINGTON—York & Smullins' Watson 1, 29-4-13, dr shale 3622 ft. Wilmington Consolidated Oil Co.'s 1, rigging up rotary.

NORTHERN CALIFORNIA

KERN COUNTY

BELRIDGE—Belridge Oil Co.'s No. 27-8, 27-27-20, sd 3730 ft; No. 27-64, 27-27-20, dr shale 3255 ft; No. 35-8, 35-27-20, dr hard shale 4150 ft; No. 35-33, 35-27-20, sd 3980 ft; No. 35-49, 35-27-20, sd 4761 ft; No. 35-49, 35-27-20, sd 1055 ft. Continental's Result 2, 36-27-20, dr shale 3378 ft. General Pet.'s Berry 1, 30-28-21, dr shale 3999 ft. Ohio's Bloemer 1, 36-27-20, making production test, td 5985 ft. Reward Oil Co.'s Associated 4, 34-27-20, dr shale 4600 ft. Standard's McPhail 2, 36-27-20, fsh 5205 ft, will test. Texas' Martin 1, 22-27-20, sd 5048 ft. Union's Belridge 17, 36-27-20, making production test, td 5541 ft. K. C. Wallace's No. 1, 32-29-21, coring 4215 ft.

BLACKWELL'S CORNER — F. B. Langstroth's No. 1, 14-26-19, rig. Miley et al's No. 1, 17-26-19, rigging up rotary.

BUENA VISTA HILLS — Federal Drilling Co.'s No. 6, 20-31-24, pumping water and small amount of oil, td 5367 ft.

BUTTONWILLOW—Wilshire Oil Co.'s Salisbury 1A, 7-29-24, co 6995 ft.

CARIZZO PLAINS — Panorama Oil Co.'s Panorama 1, 7-31-21, re-dr 2350 ft. Tray-El Oil Co.'s No. 1, 7-32-22, sdtr bit 1205 ft.

DEVIL'S DEN—Cumberland Oil Co.'s Cumberland 1, 21-26-18, co 1590 ft. Tom Hannah's No. 1, 25-25-18, cmt 6¼-in cas 2925 ft. Standard's Alferitz 1, 14-25-18, dr shale 2800 ft.

SEMITROPIC—Shell's Williams 1, 17-27-23, making production test, co to 8922 ft, td 9702 ft, swabbed water.

SHALE HILLS—Rio-Cal Pet. Co.'s No. 1, 2-27-18, co 2313 ft.

WEED PATCH—Alpine Oil Co.'s Di Giorgio 1, 13-31-29, dr shale 3168 ft. Mohawk Oil Co.'s Earl 1, 4-31-29, rigging up rotary; Wharton 1, 32-30-29, dr hard sand 5905 ft. Osborn & Colter's Shell-Duff 1, 15-30-29, rig. Shell's Morris 1, 32-30-29, dr shale 4829 ft; Porter 1, 29-30-29, dr sand 6200 ft; Porter-Day 1, 29-30-29, dr hard shale with some oil, td 8180 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s Augur 191-1, 24-4-29, running string of 6⅝-in cas to connect on to liner to complete oil string, td 4191 ft; plugged to 4155 ft for continuation of production tests.

GATO RIDGE — Barnsdall's Tognazzini 1, 9-8-32, fsh 6115 ft.

GOLETA — General Pet.'s More 3, dr red shale 4820 ft. George W. Johnson's Duncan 1A, 19-4-27, dr shale and shell 1500 ft. Southern California Drilling Co.'s Bishop 1, 12-4-29, sp.

ORELLA—General Pet.'s Erburo 10, dr shale 1505 ft.

PURISIMA—Vaqueros-Major Oil Co.'s Union Annex 3, running 8⅝-in oil string to make production test, td 3145 ft.

SANTA MARIA — Western Gulf Oil Co.'s Bradley 1, 5-9-33, dr shale 6100 ft.

VENTURA COUNTY

BARDSDALE—Ross et al's No. 10, 12-3-20, dr shale 250 ft.

CONEJO—Triunfo Oil Co.'s No. 1, 24-1-19, dr shale 2150 ft.

FILLMORE—Associated's Young 1, 16-4-20, new lcn.

HOPPER CANYON — Berdeen Pet. Co.'s No. 1B, 13-4-19, lcn.

OJAI—Dreadnaught Oil Co.'s Canet 1A, dr shale 2215 ft.

OXNARD—Magu Syn.'s Utt 1, dr rock and sand 2424 ft.

RINCON — Chanslor-Canfield Midway Oil Co.'s Hobson A2, 23-3-24, dr shale 9115 ft. Continental's Grubb 1, 23-3-24, dr hard sand 1600 ft.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, sd 1685 ft, flowed sulphur water on production test.

SANTA PAULA—Belga-American Oil Co.'s No. 1, 22-4-21, dr 250 ft.

SESPE — Merchants Pet. Co.'s Cochran 1, 1-4-20, dr out cmt 900 ft. Superior's Kirtlan 1, 15-4-21, dr shale 6220 ft.

MISCELLANEOUS

FRESNO COUNTY — Associated's Mitchell 1, 22-21-15, dr shale 4468 ft.

KINGS COUNTY—L. W. Seymour's No. 1, 10-23-16, fsh 1010 ft. Irma Investment Co.'s No. 1, 7-23-20, rigging up rotary. Kettleman Lakeview Oil & Gas Co.'s No. 1, 11-23-19, co

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Call for Drilling Contracts

As Receiver under the 44th District Court of Dallas County, Texas, I am in charge of a Lease known as the Julia Finney Lease, being a 102-acre Lease in the Joiner Field, Rusk County, Texas, proven territory, situate on the extreme Southwest corner of the Isaac G. Parker Survey, about a mile Northwest of the Joiner original Discovery Well. I want propositions from responsible parties willing to drill at least four wells on said tract (perhaps more) at an upset price per well, to be paid for out of three-fourths of seven-eighths of the oil produced from the given well. Party should be able to furnish bond for performance in the amount of the contract price. Interested parties please communicate with

Ernest R. Tennant, Receiver,
c/o Dallas Bank and Trust Co.,
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1285 ft. Valley Exploration Co.'s Brennan 1, 20-23-20, swabbed water, td 3710 ft.

MENDOCINO COUNTY—Twin States Oil Co.'s Soldani 1, 14-12-17, dr shale 6542 ft.

SAN LUIS OBISPO COUNTY—Paso Robles Syn.'s Emerick 1, 34-27-11, fsh 3970 ft. Continental's Hellman 1, 26-25-11, dr gray sand 5050 ft.

SANTA CRUZ COUNTY—Wellton Oil & Gas Co.'s Galletly 1, will make production test, td 2880 ft.

TULARE COUNTY—George Knopp's No. 1, 20-22-27, dr shale 570 ft. W. D. McCoy's No. 1, 35-21-27, re-dr 600 ft. C. E. Pettingill's Campo Verde 1, 15-22-27, co 500 ft. Turk and Campbell's Nevins 1, 34-22-27, dr 1400 ft.

ARKANSAS

UNION COUNTY, (Urbana)—
Marine Oil Co., Thompson E-1, 10-18-13 ..... 210 3546

UNION COUNTY, (Smackover)—
Hamilton et al, Arnold & Doyle 3, 231-15-16 ..... 54 2092

MONROE COUNTY, (Amory)—
Amory Pet. Corp., Harris 1, 18-13s-17w ..... ¶5½ 2399

CLARKE COUNTY, (Quitman District)—Gulf Ref. Co.'s Box 1, nw se 11-2n-15e. elev. 221 ft, 15½ ft 10-in 922 ft, top Midway black shale 2205 ft, top Selma chalk 2635 ft dr chalk 3290 ft.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft, 13⅜ cas 1389 ft, 9⅝ cas 2929 ft, str crooked hole td 3195 ft in brown sand.

CHICKASAW COUNTY—Hightower & Golsan's Fleming 1, 20-13s-3e, wo 6-in cas td 1505 ft.

JASPER COUNTY (Bay Springs District)—Bay Springs Pet. Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, 15½ cas 104 ft sdwo fuel 768 ft in sandy shale (corrected depth).

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10s-4w, rig.

MONROE COUNTY — Amory Dev. Co.'s Bourland 1, sw ne 2-15-19, sd in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-12-19, 10-in 694 ft 8¼ cas 1276 ft bit recovered dr shale claim slight show gas 1852 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, elev. 455 ft, 10-in top Paleozoic rock 478 ft, 6-in 2324 ft, tested dry 2350, 2356 and 2372 ft, top gas sand (correct) 2379 ft, gauged 5,598,000 cu ft gas 512 lbs rock pressure td 2399 ft (20 ft sand).

RANKIN COUNTY, (Jackson District) — Love et al's Muse 1, se se 32-7-4e, 12½ cas 600 ft dr sticky sandy shale in Wilcox 2900 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw ne 6-5-2e, hf fluid sd wo 2500 ft. Atkisson et al's Valentour 1, nw nw 18-5-2e, dk.

SCOTT COUNTY, (Forest District)—Cully et al's Owens 1, 2-8n-9e, dk.

SMITH COUNTY, (Raleigh District)—Pocahontas Nat. Gas Co.'s Adams Banks Lbr. Co. 1, ne sw sw 10-3n-7e, elev. 425 ft 10-in 441 ft tested 90 ft fresh water in 8 min thru ds 2732-38 ft dr lignitic shale in Wilcox 3500 ft.

WARREN COUNTY, (Vicksburg Dist.)—Eagle Lake O&G Co.'s Kiger 1, sw se 9-18n-2e, dk. Dixie Pet. Co.'s Pat Henry 1, se ne 36-17n-4e, dk. Vicksburg O&G Co.'s Dornbusch 1, sw ne 8-18n-5e, sd 1600 ft.

WINSTON COUNTY, (Louisville District) —Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, dr Tuscaloosa 2619 ft.

YALABOUSHA COUNTY, (Water Valley District)—J. D. Collett et al's Blackmer 2, sw nw 14-11s-4w, 12½ cas 103 ft 8⅝ cas 2426 ft, dr sandy shale 2900 ft.

ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, show gas 300 ft dr 700 ft (no recent report).

SUMTER COUNTY (Livingston District)—Forked Lightning O&G Co.'s Nixon 1, sw ne 30-20n-2w, dk.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft. Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, sd 2075 ft..

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Byron Jackson Rod Hooks

The smaller hook, designated as the BJ "15," is recommended for a safe load capacity of 15 tons, this weight being the equivalent of a 17,000-foot string of ¾-inch sucker rods complete with couplings; and the larger hook designated as BJ "20" with a safe load capacity of 20 tons, being the weight of a 23,000-foot of ¾-inch sucker rods complete with couplings.

A unique feature of construction of these hooks is the locking arm which extends outward from the bill of the hook and closes automatically when the elevator bail is taken. This locking arm cannot thereafter be unlatched except by the operator and not fully opened until the load is removed. By connecting the bill of the hook to the body a closed link is formed.

Descriptive illustrated literature may be obtained by addressing Byron Jackson Company, P. O. Box 1307, Arcade Station, Los Angeles.

"Oilwell" Lone Star Boiler

OIL WELL SUPPLY COMPANY

Oil Well Supply Company, Oil City, Pennsylvania, has recently introduced a new light weight boiler identified as the "Oilwell" Lone Star No. 1008. It is built for 250 pounds working pressure, and has a rating of 100-106 horsepower. It is compact in design with an overall length of 19 feet, eight inches, with a fire box 84 inches long and weighs 11½ tons. Two and one-quarter-inch tubes provide heat transfer.

A full open bottom fire box, with solid steel mud ring, is to permit the use of larger gas burners, and also to provide for over 155 cubic feet of combustion space; 156 seamless steel tubes are arranged in vertical rows with four wash-out plugs installed in the back of tubes at the smokebox end. This facilitates washing the inner tubes from all angles and gives access to tubes that otherwise could not be reached.

The Lone Star boiler is regularly furnished with tubes welded in the fire box end. A surface blow-off is standard equipment and consists of a copper funnel with the mouth at the water level. Impurities floating on the surface of the water are carried into the mouth of the funnel.

A thermic syphon is optional. This exclusive "Oilwell" feature is to increase water circulation, giving positive circulation over the crown sheet for perfect protection, and provides more heating surface at the hottest part of the boiler.

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Imperial Sucker Rod Elevator

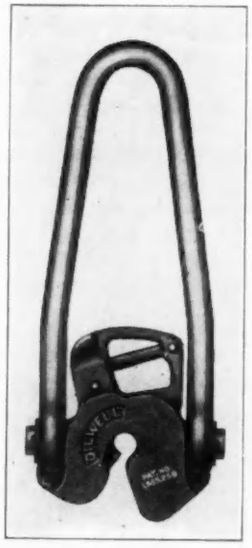
OIL WELL SUPPLY COMPANY

Oil Well Supply Company, Oil City, Pennsylvania, announces the development of the Imperial sucker rod elevator, which, in its design, covers three major factors; simplicity, strength and convenience. The one working part has been protected in the design and construction against clogging from paraffine or dirt. Its capacity is sufficient to carry the longest string of rods in use today.

After stabbing. rods cannot be released except at the will of the operator. The handle is simply "squeezed" to disengage the elevator. Protection for the operator's hand and a thumb brace are provided in this design. There are no plates, screws nor triggers used.

The new Imperial elevator is all steel, heat treated and hardened. It is reversible and both faces are flat, to rest firmly on the tubing tee or guide. It is made in two sizes ⅝ by ¾-inch and ¾ by ⅞-inch.

Folder No. 433 is available upon request. It completely describes this new elevator for sucker rods.



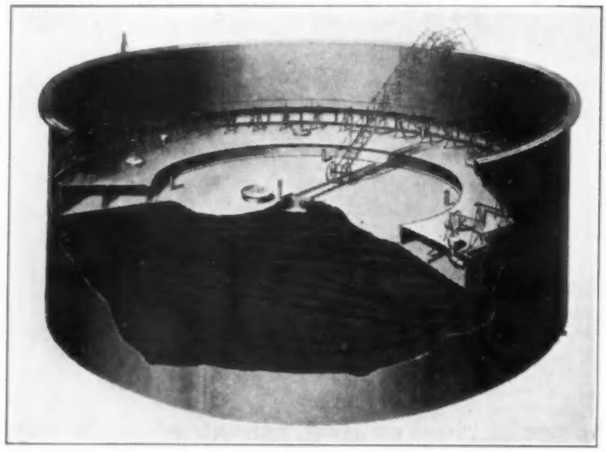
Oilwell Sucker Rod Elevator

Wiggins Pontoon Roof

CHICAGO BRIDGE & IRON WORKS

Chicago Bridge & Iron Works is now building a new pontoon type of Wiggins floating roof in addition to the regular standard open deck type of floating roof which they have been building for a number of years. The principle of the new design is essentially the same as the open deck type, except that the pontoon feature has been added.

The outer edge of the deck is built in the form of a continuous annular pontoon. This continuous section is divided at regular intervals by bulkheads which form water tight



New Wiggins Roof

compartments. The sections, each of which acts as an individual pontoon, make the deck practically non-sinkable.

The principal advantage of the pontoon construction, however, is that it provides insulation for the roof where insulation is most valuable, at the seal which closes the space between the deck and the tank shell. Temperature readings on installations show that the temperature throughout the depth of the seal is relatively uniform and is materially lower at the hottest part of the day than if the insulation were not provided.

The new design uses the standard Wiggins seal which consists of a ring of shoes that form a long sliding contact with the tank shell. The shoes are joined to the deck with a flexible material which allows the seal to expand or contract, taking care of the irregularities on the inside of the tank shell or any slight out of roundness on the tank shell.

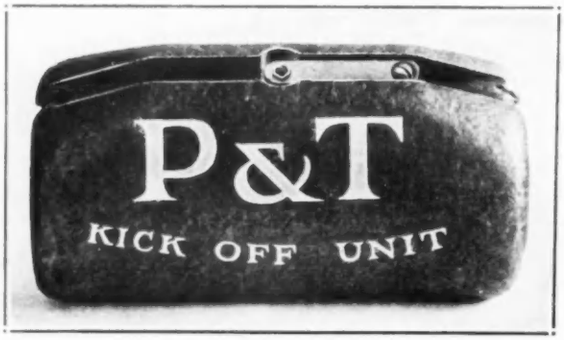
The new Wiggins pontoon roof is designed particularly for use on tanks storing light oils at locations which experience high temperatures.

P. & T. Kick Off Unit

PRICE-TRAWICK, INC.

Price-Trawick, Inc., P. O. Box 295, Stroud, Oklahoma, has developed the P. & T. kick off unit, a new device for starting the flow of wells. The device is designed to eliminate the high starting or kick-off pressure of wells operated by air or by gas lift, thus acting as a safety device against the hazards of high starting pressures.

The P. & T. unit is a tubing coupling having a double seated valve interposed and with a double ended valve member extending through the valve seats. The valve is equipped with a leaf spring and is mounted on the coupling, these springs being made of non-corrosive metal which affords protection for both valve and seats against acids, gases, etc. The P. & T. unit is spaced in the fluid, depending on the nature of the wells. They are spaced closer together where the fluid is water and basic sediment combined with the oil. In wells where the P. & T. unit is installed the flow always starts under its normal working pressure and does not exceed this working pressure. Thus it is both a pressure and a volume operated or controlled unit.



In small wells or wells of declining production the P. & T. unit is installed and through its use the flow may be reversed whereby it will flow through the tubing instead of the outer side. The kick-off pressure is virtually the same through the tubing as on the outer side when this unit is employed.

The P. & T. unit has been proved mechanically correct both in construction and design and the seats, valves, screws and springs are made of Monel metal. This unit is made to fit any size tubing where either air or gas lift is used. A new descriptive folder on this unit may be obtained from the manufacturers direct.

Repair Clamp

GEORGE W. GRIMES COMPANY

George W. Grimes Company, Bluffton, Indiana, has placed on the market a new pipe line repair clamp for every size pipe, from three-inch up.

This repair clamp offers as an outstanding feature its simple application, using only a small percentage of working space in a ditch where repairs are necessary to install that formerly was necessary.

Grimes Repair Clamp

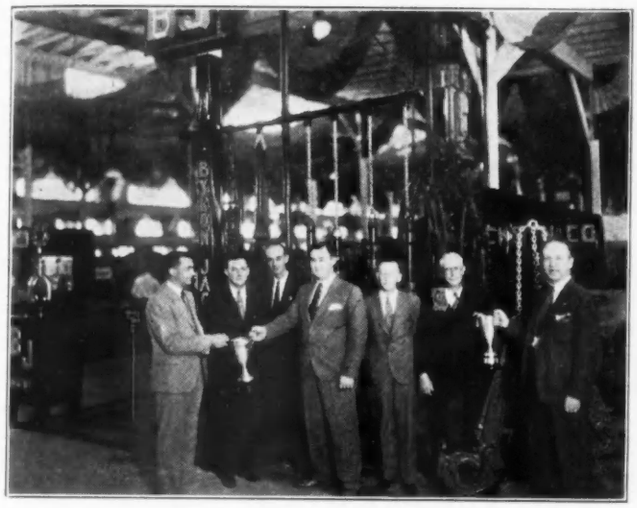
The clamps are made in three sets of sizes, the smallest for three, four and five-inch pipe. The second set is used for six, seven or eight-inch pipe, and the largest set is for 10 or 12-inch pipe. The nuts on the cross bolts are merely tightened or loosened to adjust clamps to the size of pipe to be repaired. For example, to make an eight-inch clamp fit a six-inch pipe the operator only needs U-bolts to fit the six-inch pipe and then tightens up the nuts on cross bolts until the castings fit the pipe.

This type clamp is offered primarily to permit the carrying of less stocks of repair clamps on hand.

Oil proof packing, designed especially for Grimes clamps is available in 35-foot rolls, direct from the manufacturer.

The company's Bluffton, Indiana, headquarters will gladly furnish detailed information on this repair clamp upon request.

Manufacturer and Supply Dealer Notes



Byron Jackson Company, for the second time in as many years was awarded the cup for the most attractive display at the 1931 Equipment and Engineering Exposition recently held in Los Angeles. The photograph shows, (from left to right): E. G. Lenzner, exposition manager; F. E. Sutton and H. S. Sutton, Byron Jackson representatives; R. M. Cook, sales manager for California; R. H. Funk, H. W. Driggs, sales representatives in California; and J. S. Mellon, manager of export sales, holding the cup presented at the 1930 show at Los Angeles.

Reed Roller Bit Company entertained approximately 850 guests Monday evening, April 13, at its headquarters office and plant, Navigation Boulevard and Mack Street, Houston, with an elaborate program and barbecue dinner. S. P. Farish, president of the company, was master of ceremonies. A trip through the plant was conducted by W. L. Childs, vice president and general manager. "Foot Prints on the Sands of Time," a dramatic presentation by the company employes, depicted the rise of Reed Roller Bit Company since its organization. Ben F. Fairless, vice president of Republic Steel Corporation, Youngstown, Ohio, made a 30-minute address, "What of Tomorrow."

Lufkin Foundry & Machine Company, Lufkin, Texas, announces that effective April 13, its Los Angeles branch office and warehouse is located at 5959 South Alameda Street, where day and night service is to be maintained. Fred E. Yeager is field and service man and E. P. Trout is in charge of sales through this new office. The announcement states that the company will retain its Bakersfield warehouse at the Pioneer Truck Company, Sixteenth and "Q" Streets. The complete line of Lufkin equipment will be carried in stock, including a pump installed and electrically operated on the company's display lot at the north side of the office.

Victor Equipment Company, San Francisco and Los Angeles, which recently merged Victor Welding Equipment Company with Kimball-Krough Pump Company, announces the appointment of George Pennington as vice-president and general manager of the pump division with headquarters at Los Angeles. He was graduated as hydro electric engineer at Sheffield University, England, and has had 29 years engineering experience in America.

Byron Jackson Company has made recent additions to its sales staff of the oil tools division as follows:

B. M. Landis, who has been with the company for seven years, has been transferred to Tulsa from Los Angeles and will cover the Oklahoma and Kansas territory.

Waldo Moore is now on an extended trip through the Rocky Mountain and Canadian oil field territories out of the Tulsa office.

Westinghouse Electric and Manufacturing Company stockholders, April 8, re-elected directors whose terms had expired as follows: E. M. Herr, vice chairman; and L. A. Osborne, vice president of that company; H. B. Rust, president of the Koppers Company, and Samuel M. Vauclain, chairman of the board of Baldwin Locomotive Works. President F. A. Merrick, in a statement to stockholders, announced the current assets of December 31, 1930, as $115,104,125 as against current liabilities at that time of $15,186,858.

TYLER
TUBES TO MEET EVERY OIL FIELD NEED
Whether you need standard tubes—or tubes designed to meet special requirements — we can serve you promptly and economically.
THE TYLER TUBE & PIPE CO.
WASHINGTON, PA.
Write for complete information—you will not be obligated.
Texas Stock—The Corbett Corporation
Houston, Texas
Oklahoma Representative:
Harrisburg Supply Co.
Tulsa, Oklahoma
BOILER TUBES

Squeaks From the Bull Wheel

"Did you get those two tickets today?"
"Yes, and free; one for speeding and the other for driving without lights."

I'd give that bird a ring-side seat
In Hades' hottest place,
Who, knowing I've spotted a place to park,
Sneaks in and grabs the space.

"How much cider did you make this year?"
"Fifteen barrels."
"It's a shame that you dinna have another apple, you might of made another barrel!"

"Are you sure this suit will not shrink if it gets wet?"
"Mine frendt, every fire company in de city has squirted water on dat suit."

"Mister, gimme a dime for a cupa coffee?"
"Let's see the coffee."

"Dat boy ob mine is a wonderful runner. He could run a mile in two minutes but for one thing."
"An' what's dat?"
"Well, de distance am too great fo' de shortness ob time."

"Waiter, it's been half an hour since I ordered that turtle soup."
"Sorry, sir, but you know how turtles are."

"I want a very careful chauffeur—one who doesn't take the slightest risks," warned the would-be employer.
"I'm your man, sir," answered the applicant. "Can I have my salary in advance?"

"All right, I'll take the case. I feel sure I can get you justice."
"Well, if that's the best you can do, I'd better get another lawyer."

"Say, paw, the teacher asked me to find the greatest common divisor."
"Great heavens, is that thing still lost? The teacher had me hunting for it when I was a kid."

"Do you think it right to buy an automobile on the installment plan?"
"Sure, 16,000,000 people can't be wrong."

"What are you going to do after you graduate?"
"Sell bon—"
"But I mean, what are you going to do after that?"

Janet: "Jack says he can read you like a book."
Olive: "Yes, and darn him, he wants to use the Braille system."

"You look like a fool," thundered the disgusted man to his son just returned from college. "More and more like a conceited harebrained, helpless fool, every year."
Just then an old acquaintance of the old gentleman entered the office and saw the youth.
"Hello, Jack; back, eh?" exclaimed the visitor. "You're looking more and more like your father every year."
"Yes," said Jack, "That's what the governor's just been telling me."

Impatient Man (outside telephone box): "Can I help you to find the number you want?"
Young Woman (sweetly): "Oh, I don't want a number. I'm looking for a pretty name for my baby."

Lady (at busy corner): "Isn't it wonderful how a single policeman can dam the flow of traffic?"
Her Escort: "Yes, but you should hear some of the motorists that are held up."

"Herb, we need another man for this party. Do you want to go out?"
"Sure."
"Have you the inclination?"
"And how."
"How's your technique?"
"Great."
"And your hands?"
"Fine."
"Great. We need a piano player."

One of two janitors in a studio was fired. A few days after he was out, a phone call came for him.
"He ain't here," answered the remaining janitor.
"When will he be in?" came from the phone.
"I don't think he'll be back here again—there's been a shakeup in this department," answered the broom pusher.

"Joe, do you think the newspaper will be replaced by the radio?"
"No, no, you can't swat flies with a radio."

"When in Rome did you do as the Romans do?"
"No—my wife was with me."

Prof. "Give an example of implicit faith."
Frosh: "A guy who believes in Santa Claus, the Easter Rabbit and naval disarmament."

Why don't we get a couple of

APPLEMANS?

Driller: "Son, I'm about to freeze to death! I'd just as soon not work on a night like this."

Roughneck: "It'll be alright if we don't have to come out of the hole."

Driller: "Yeah . . . and you can bet your cockeyed life that we'll have two trips at least to make 'fore day on account o' those bits we got. They just haven't got the stuff."

Roughneck: "Say, why the Sam Hill don't we get a couple of APPLEMANS and finish this hole in a hurry?"

B.K. APPLEMAN
BEAUMONT, TEXAS

B-M-W PRODUCTS for pumping wells
The KEY to LOWER LIFTING COSTS
CORRECTLY DESIGNED .. ECONOMICALLY PRODUCED
REASONABLY PRICED

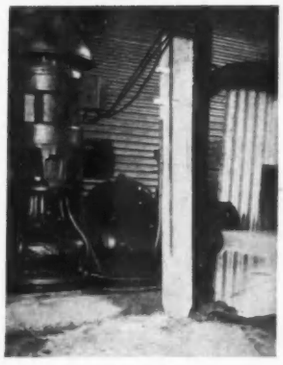
And Now! CHROMIUM

Plated Working Barrel Tubes

There is a reason why B-M-W NON-KRO Seamless Steel Working Barrels, B-M-W ADMORE LINER Barrels or B-M-W NON-KRO Outside Tubes for ADMORE Liner Barrels last from 5 to 10 times longer than ordinary tubes in the difficult pumping sectors of Arkansas and Louisiana—each tube is carefully selected and then highly polished before the plating is applied. B-M-W NON-KRO is perfect plating! Ask your Supply Store for these units—give them a trial.

BRADFORD MOTOR WORKS INC.
OIL WELL SUPPLIES
BRADFORD, PA. TULSA, OKLA.
EXPORT OFFICE—30 CHURCH ST.—NEW YORK CITY

One Million Gallons Per Day



"Water or No Pay."

for irrigating the Golf Courses at the Jockey Club at Buenos Aires, S. A.

LAYNE scores again! The golf courses and lawns at the Jockey Club, in Buenos Aires, need constant irrigation. This irrigation system demands a vast amount of water, and this was not possible to produce until Layne methods of developing underground formations were applied to the underlying water bearing sands in that section.

Now there flows through Layne wells, operated by Layne pumps, one million gallons per day of clear, cool water for irrigation and general use at this beautiful club!

Layne again proves one of their basic claims — that frequently there is an abundance of ground water available — if Layne advanced methods are used!

Write the address below for the name of the Local Layne Engineer in your vicinity, and discuss your water developing problems with him.

LAYNE & BOWLER, Inc.
MEMPHIS, TENNESSEE

Water Wells and Pumps LAYNE Water Supply Systems

DON'T TAKE A CHANCE

-not with welding wire!

It may *look* safe to use an inferior welding wire, but it isn't. Just as it may *look* safe to try to beat the train at the crossing. Expert drivers and expert welders are alike—they don't take chances.

And there is no need to—not when Page-Armco Welding Wire and Electrodes are available that have the qualities essential for best production under job conditions. Each piece is carefully processed to insure uniform welding. Each piece is free from detrimental inclusions. Each piece is shop-tested to assure good welds all the time.

Our engineering and research staff is at your service at any time without obligation. Write

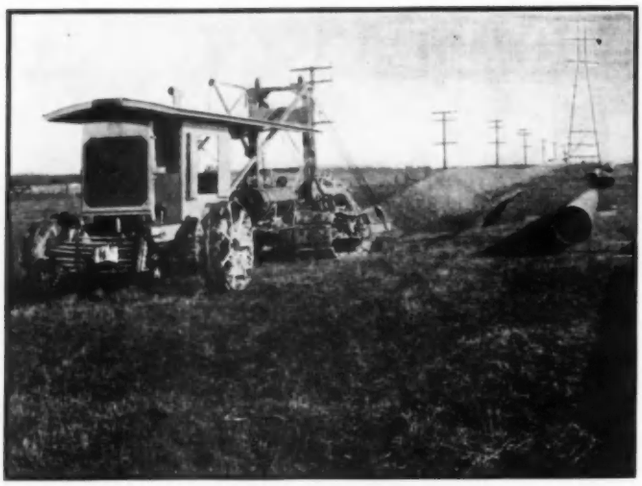
PAGE STEEL *and* WIRE COMPANY
An Associate Company of the American Chain Company, *Inc.*
General Sales Office:
701 American Bank Bldg., Pittsburgh, Pa.
District Sales Offices:
Chicago, New York, Pittsburgh, San Francisco
Canadian Distributor and Manufacturer:
Frost Steel and Wire Co., *Limited*, Hamilton, Ont.

SYMBOLS OF GOOD WELDING WIRE

PAGE-ARMCO

FLAME-TESTED PROCESSED SHOP-TESTED

WELDING WIRE and ELECTRODES



Heavy-duty Buckeye Model 48 Pipe Liner. Cuts 6 different widths—22" and 40"; any depth to 8½'. All dimensions inclusive.

OVER 30 YEARS SUCCESSFUL PERFORMANCE

proves Buckeye pipe-liners profitable investments

In buying pipe line equipment, it should be considered from many angles. First, its ability to best serve the working requirements of the purchaser. Second, how long it can be expected to render this service efficiently. Third, its original cost and maintenance should be scaled over a reasonable period of years, so that its earning power may be judged fairly. Fourth, the reputation of the manufacturer —has he specialized in his line of equipment; and has he an established policy of square dealing.

Gauged by these sound standards, Buckeye pipe-liners are good business investments. Actual users testify that these ditchers best meet all oil and gas field requirements. Over 30 years' successful engineering and mechanical experience has tested and proved the Buckeye operating principle and construction. Consequently, its endurance and efficiency may be accepted as fact—positive assurance that your money is safely protected. Most important, our helpful interest in every Buckeye continues throughout its life.

Valuable specification and performance details, also authentic service records, are contained in our catalog, "BUCKEYE—*The Pipe Liner*". A copy will be gladly and promptly sent to any prospective pipe line ditcher owner or user upon request.

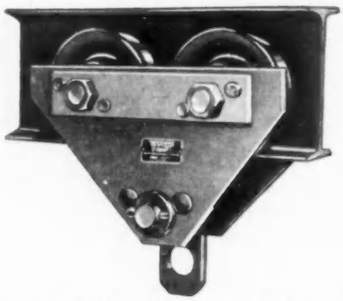
The Buckeye Traction Ditcher Co.
FINDLAY, OHIO

There's a Buckeye Sales and Service Office near You

for over thirty years **Buckeye**

WRIGHT

TIMKEN ROLLER BEARING TROLLEY



Ruggedness and flexibility are built into every Wright Trolley. Eight Timken Tapered Roller Bearings absorb not only the radial load but also all end thrust, making it possible to start a one-ton load with only eleven pounds push.

There is a Wright Distributor nearby.

OTHER WRIGHT PRODUCTS

Type "W" Electric Hoist.
Type "WH" Low Headroom Electric Hoist.
High Speed Chain Hoist.
Army Type Low Headroom Hoist

DISTRIBUTORS SERVE INDUSTRY ECONOMICALLY

ACCO

WRIGHT MANUFACTURING COMPANY
BRIDGEPORT, CONNECTICUT
An Associate Company of the American Chain Company, Inc.

We specialize in Oil Property FENCING

Cyclone is cheaper in the long run

Our long experience in fencing oil property is valuable to you. We will help you select fencing best suited for tank farms, refineries, bulk stations, etc. Cyclone copper-steel fence is heavily galvanized to last many years. And our trained men erect your fence *right*. The Cyclone Fence Company stands back of every installation. Get our estimate on your fence job before you buy. Phone, wire or write.

Cyclone Fence
REG. U.S. PAT. OFF.

© C. F. Co. 1931

CYCLONE FENCE COMPANY
Works and Offices: Fort Worth
Direct Factory Branches and Warehouses: Houston, Dallas, Tulsa
Also Sales Offices: New Orleans, Shreveport
SUBSIDIARY OF
UNITED STATES STEEL CORPORATION
Cyclone—not a "type" of fence—but fence made exclusively by Cyclone Fence Company and identified by this trademark.

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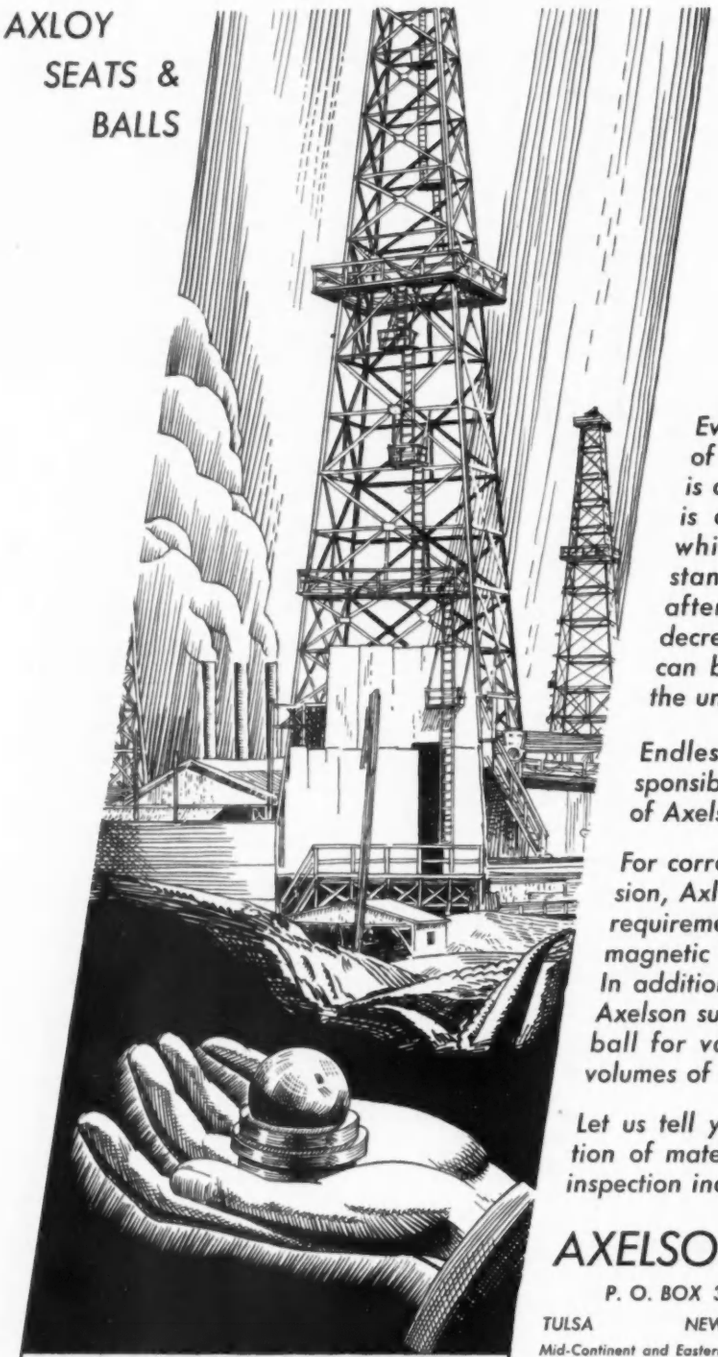
• • • • In the hollow of your hand

AXLOY SEATS & BALLS



Every production superintendent holds the life of his pump in the hollow of his hand. A chain is only as strong as its weakest link. A pump is only as effective as the seats and balls which comprise part of its working and standing valves. Month after month, year after year, Axelson Seats and Balls have decreased costs per barrel of crude. Economy can be definitely predetermined because of the uninterrupted service given.

Endless research and investigation are responsible for the development of many types of Axelson seats and balls.

For corrosive conditions and excessive abrasion, Axloy has been developed; for general requirements - tool steel; for wells in which magnetic influences or water occurs - bronze. In addition to standard A. P. I. specifications, Axelson supplies a super-size Axloy seat and ball for valves designed to exhaust larger volumes of fluid.

Let us tell you more about the careful selection of materials, fine machining and minute inspection incorporated in this product.

AXELSON MFG. CO., Ltd.

P. O. BOX 337, LOS ANGELES, CALIFORNIA

TULSA NEW YORK: 30 Church Street ST. LOUIS

Mid-Continent and Eastern Distributors: FRICK - REID SUPPLY CORPORATION

STRAIGHT FACTS—

This is the seventh of a series of advertisements and the first on Seats and Balls

A MANUFACTURERS SINCE 1892 — THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

1 *I am interested in learning more about the complete line of Axelson Seats and Balls.*

Name_____

Company_____

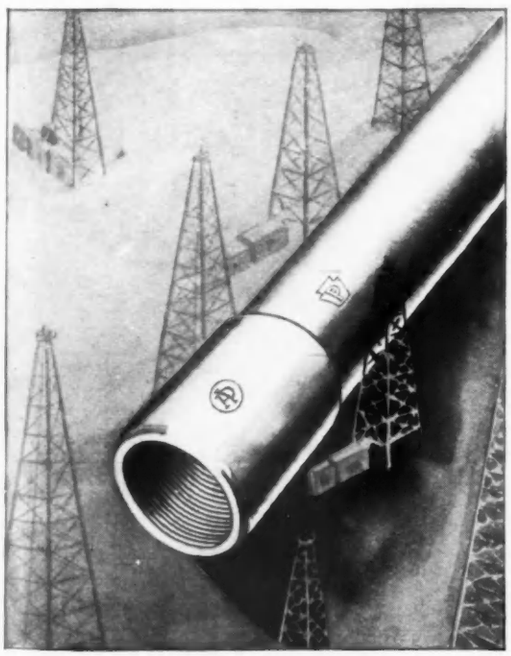
Position_____

Address_____

AXLOY TOOL STEEL SUPER-SIZE BRONZE

AXELSON SEATS AND BALLS

REHEATED FOR RESISTANCE



GREATER pressure and weight at greater depths necessitate the *certainty* of maximum resistance in casing. Nothing is left undone to assure this certainty in Pittsburgh Seamless High Tensile Casing. Pierced from solid billets of finest open hearth steel and rolled hot, it is an extremely tough, forge-finished product. But this is not enough for "Pittsburgh" standards. As a final assurance of well-balanced strength, it is reheated after rolling. This operation removes any possible disturbance of grain structure that may have been set up in previous operations and also restores ductility. Its resistance to deep well stresses thereby is made doubly sure.

Pittsburgh Seamless High Tensile Casing is obtainable in both 95,000 and 110,000 pounds, minimum tensile grades, made to A. P. I. specifications.

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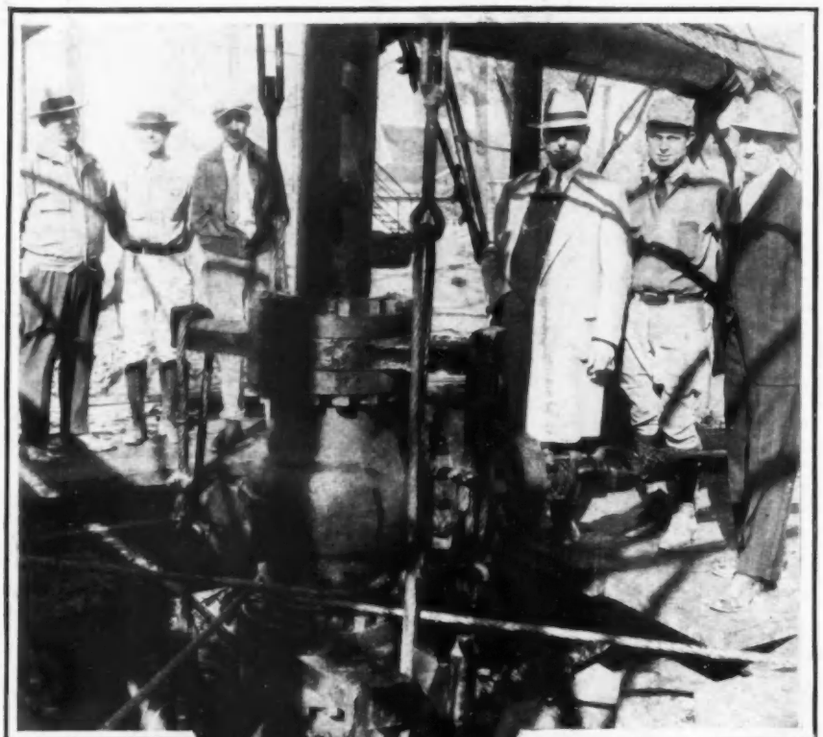
HIGH TENSILE CASING

3039

THE GREATER THE WELL...



the greater the

REASON

for using

HUGHES VALVES

Sold By Supply Stores Everywhere

The men in the picture are (left to right): T. J. Spikes, H. R. Theck, Earl Griffin, C. E. Klein, C. D. Sutherland, and Prentiss Seale.

The above well is the Phillips Petroleum Company's Nunn No. 1, Oklahoma City.

Initial production was 66,000 barrels of oil and 47,000,000 feet of gas—pressure 1000 lbs. Three 9⅝", 5000 lb. test, Hughes Drilling Valves successfully handled the production of this large well.

Hughes Valves and Fittings are recognized throughout the Industry for their safe, sure performance.

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